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ABSTRACT

In this assessment of the reading rate and literal comprehension skills of 9, 13, and 17 year olds, and of young adults between the ages of 26 and 35, individuals were asked to read two passages, one more difficult than the other according to readability formulas. Then each subject was asked to answer five multiple choice comprehension questions which were designed to measure the reader's comprehension of details from the passage. Copies of the passages are reproduced in the text, and the comprehension exercises are given in the appendix. For each group evaluated, the results are given by region, sex, race, parental education, and size and type of community. Readers are cautioned to avoid comparing reading rates or comprehension scores across age groups because all groups did not read passages of the same type, nor is there an even progression of difficulty in the readability of the passages. (TO)

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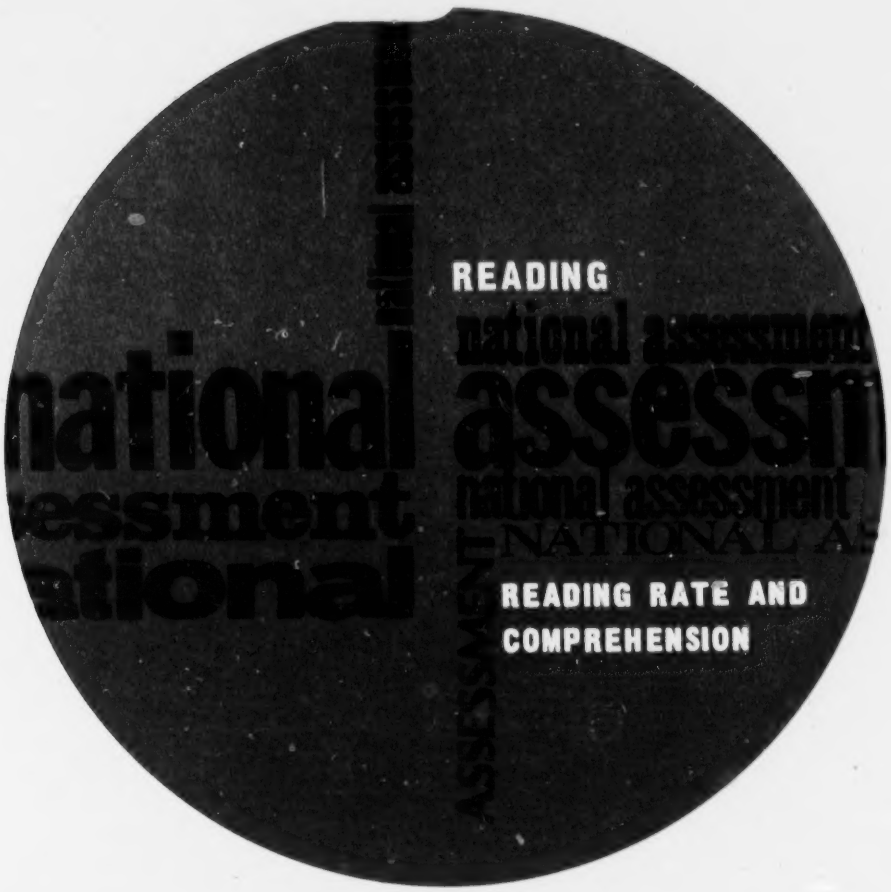

REPORT 02-R-09

Reading Rate and Comprehension
1970-71 Assessment

NATIONAL ASSESSMENT OF EDUCATIONAL PROGRESS
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TABLE OF CONTENTS

Introduction		1
Chapter 1	9-Year-Olds: National Results	4
	Results by Region	27
	Results by Sex	32
	Results by Race	36
	Results by Parental Education	40
	Results by Size-and-Type of Community	46
Chapter 2	13-Year-Olds: National Results	53
	Results by Region	70
	Results by Sex	76
	Results by Race	80
	Results by Parental Education	84
	Results by Size-and-Type of Community	90
Chapter 3	17-Year-Olds and Young Adults: National Results	98
	Results by Region	121
	Results by Sex	132
	Results by Race	139
	Results by Parental Education	146
	Results by Size of Community	157
	Results by Size-and-Type of Community: 17-Year-Olds Only	167
Chapter 4	Exceptionally Fast Readers	175
Chapter 5	Slow Readers	178

Appendices:

Appendix A Readability of Reading Rate Passages. 182

Appendix B Comprehension Exercise. 187

Appendix C Percentages of the Population Who Answered Questions Correctly on Both Passages and Read Both Passages Within the Same Rate Category 218

Appendix D Percentages of the Population Who Read in Each Rate Category on Both Passages and Who Answered Four or More Comprehension Questions Correctly On Both Passages. 222

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LIST OF EXHIBITS

Exhibit 1-1-1. 4

Exhibit 1-1-2. 23

Exhibit 1-1-3. 24

Exhibit 1-2-1. 27

Exhibit 1-2-2. 29

Exhibit 1-2-3. 30

Exhibit 1-2-4. 31

Exhibit 1-3-1. 32

Exhibit 1-3-2. 33

Exhibit 1-3-3. 34

Exhibit 1-4-1. 36

Exhibit 1-4-2. 37

Exhibit 1-4-3. 38

Exhibit 1-5-1. 40

Exhibit 1-5-2. 42

Exhibit 1-5-3. 43

Exhibit 1-5-4. 44

Exhibit 1-6-1. 46

Exhibit 1-6-2. 47

Exhibit 1-6-3. 49

Exhibit 1-6-4. 51

Exhibit 1-6-5. 52

Exhibit 2-1-1. 53

Exhibit 2-1-2. 66

List of Exhibits (continued)

Exhibit 2-1-3. 68
Exhibit 2-2-1. 70
Exhibit 2-2-2. 72
Exhibit 2-2-3. 73
Exhibit 2-2-4. 74
Exhibit 2-3-1. 76
Exhibit 2-3-2. 77
Exhibit 2-3-3. 78
Exhibit 2-4-1. 80
Exhibit 2-4-2. 81
Exhibit 2-4-3. 83
Exhibit 2-5-1. 84
Exhibit 2-5-2. 86
Exhibit 2-5-3. 88
Exhibit 2-5-4. 89
Exhibit 2-6-1. 90
Exhibit 2-6-2. 91
Exhibit 2-6-3. 93
Exhibit 2-6-4. 95
Exhibit 2-6-5. 97
Exhibit 3-1-1. 115
Exhibit 3-1-2. 115
Exhibit 3-1-3. 116
Exhibit 3-1-4. 116

List of Exhibits (continued)

Exhibit 3-1-5. 117
Exhibit 3-1-6. 118
Exhibit 3-2-1. 121
Exhibit 3-2-2. 122
Exhibit 3-2-3. 124
Exhibit 3-2-4. 125
Exhibit 3-2-5. 127
Exhibit 3-2-6. 128
Exhibit 3-2-7. 129
Exhibit 3-2-8. 130
Exhibit 3-3-1. 132
Exhibit 3-3-2. 133
Exhibit 3-3-3. 134
Exhibit 3-3-4. 135
Exhibit 3-3-5. 137
Exhibit 3-3-6. 138
Exhibit 3-4-1. 139
Exhibit 3-4-2. 140
Exhibit 3-4-3. 141
Exhibit 3-4-4. 142
Exhibit 3-4-5. 144
Exhibit 3-4-6. 145
Exhibit 3-5-1. 147
Exhibit 3-5-2. 148

List of Exhibits (continued)

Exhibit 3-5-3. 150
Exhibit 3-5-4. 151
Exhibit 3-5-5. 153
Exhibit 3-5-6. 154
Exhibit 3-5-7. 155
Exhibit 3-5-8. 156
Exhibit 3-6-1. 157
Exhibit 3-6-2. 157
Exhibit 3-6-3. 158
Exhibit 3-6-4. 159
Exhibit 3-6-5. 160
Exhibit 3-6-6. 161
Exhibit 3-6-7. 163
Exhibit 3-6-8. 164
Exhibit 3-6-9. 165
Exhibit 3-6-10 166
Exhibit 3-7-1. 167
Exhibit 3-7-2. 168
Exhibit 3-7-3. 170
Exhibit 3-7-4. 172
Exhibit 3-7-5. 173
Exhibit 4-1. 177
Exhibit 4-2. 181
Exhibit C-1. 218

List of Exhibits (continued)

Exhibit C-2. 219
Exhibit C-3. 220
Exhibit C-4. 221
Exhibit D-1. 222
Exhibit D-2. 223
Exhibit D-3. 224
Exhibit D-4. 225

LIST OF FIGURES

Figure 1-1 21
Figure 1-2 22
Figure 1-3 26
Figure 2-1 64
Figure 2-2 65
Figure 2-3 69
Figure 3-1 110
Figure 4-1 111
Figure 3-2 113
Figure 4-2 114
Figure 3-3 119
Figure 4-3 120

INTRODUCTION

In this assessment of the reading rate and comprehension skills of 9-year-olds, 13-year-olds, 17-year-olds, and young adults (26-35), individuals were asked to read two passages and to answer five comprehension questions following each passage. The questions were multiple choice, designed to measure the reader's comprehension of details from the passage. For all age groups the comprehension exercises asked for word for word recall of specific details: e.g., "Harvard did not include a sociology department until what year?" Or, "In the story, the boy eats a lot of _____."[1]

The respondent read the entire first passage, and his rate was recorded. He then responded to the comprehension exercises by marking one of the four choices or "I don't know" for each exercise. The respondents did not see the comprehension exercises until they completed the reading. The same procedures were repeated with the second passage.

Two passages were selected for each age level so that one passage was easier to read than the other. Readability formulae were used to determine the relative difficulty for each passage.[2] In all cases the first passage was the easier of the two for that age group. Following each passage reproduced in this report are the readability indices for that passage.[3] The reader may want to take into account the readability of the passages and the types of comprehension exercises when considering or interpreting the data presented in this report.

---

[1]The comprehension exercises are included in this report as appendix B, along with the percentage who chose each foil, the percentages from each category who chose the correct foils, and the differences of those percentages from the national percentage.

[2]See appendix A for a description of the formulae used.

[3]A rationale for and an explanation of the readability formulae are included in appendix A of this report.

The reader may also want to consider the content and style of the various passages.[4] The passages are not alike either within or across age groups except for 17-year-olds and young adults. For 9-year-olds the first passage was a narrative story about a boy and a dragon; the second, an expository essay about armadillos, was of the type found in encyclopedias. Both passages for 13-year-olds were expository, the first being a Reader's Digest-style essay about planting trees on sand dunes, the second a scientific passage about physical geology, specifically about the flow of water. The first passage for 17-year-olds and young adults was a humorous, semi-scientific article from Reader's Digest; the second was a more ponderous and straightforward essay on the nature and development of sociology.

Because all age groups did not read passages of the same type, and because there is no even progression of difficulty in the readability of all six passages, the reader should not attempt to compare reading rates or comprehension scores across age groups except for 17-year-olds and young adults where the same passages were used. The reader can legitimately note that a majority of 13-year-olds read Passage 2 faster than Passage 1 even though Passage 2 was, according to the readability formulae, considerably more difficult. But the reader ought not to decide that, because the second passage for 13-year-olds was of comparable difficulty to the second passage for 9-year-olds, he can compare reading rates and comprehension scores of 9- and 13-year-olds.

A final cautionary word: reports such as this are not light and easily readable. As a result, a reader is often tempted to skim through and pick out those comparisons which most easily stand out. In this report it is easy to see what appear to be nearly predictable patterns that reinforce many of our stereotypes about readers: girls are better readers than boys; Whites are generally better readers than Blacks; affluent suburbs contain a larger percentage of fast and competent readers than do inner city areas; etc. But in this report, when it is often least expected, the reader will occasionally be surprised to discover sharp contrasts to those patterns and stereotypes. For example, among 13-year-olds, a larger percentage of girls than boys may have read at speeds above 100 words per minute on the passages used in this study; but greater percentages of boys had comprehension scores of four or more correct (out of five items) after reading those passages. In another instance, the Northeast region of the country seems to be superior to other regions on a

---

[4]Copies of the passages are reproduced in the text of this report.

number of skills. And, in keeping with that pattern, the Northeast contained the largest percentage of 17-year-olds who had four or more correct responses on the comprehension exercises for both passages. However, young adults from the same geographical region rank third in the percentage having four or more correct responses. Thus, patterns are broken occasionally.

CHAPTER 1

9-YEAR-OLDS

National Results

Reading Rate

According to the data presented in figure 1-1 and exhibit 1-1-1, over half of the 9-year-olds (54%) read Passage 1 at 100-199 words per minute. Reading rates ranged from 0 to 570 words per minute, with a median rate of 117. Nine-year-olds at the 75th percentile read 158 words per minute on Passage 1, and 9-year-olds at the 25th percentile read 86 words per minute. The largest percentage of 9-year-olds reading within a 25 words per minute rate category was 21.0--between 100 and 125 words per minute. The largest percentage within a 50-word spread was 40%, reading between 75 and 125 words per minute. Approximately 67% of the 9-year-olds read between 50 and 150 words per minute. Nearly 10% read the first passage at 200 words per minute or faster; less than 5% read above 250 words per minute.[1]

Exhibit 1-1-1

National Results: Reading Rate
Percentage of 9-Year-Olds in Each Rate Category

	Reading Rate			
	<100	100-199	200-299	>300
Passage 1	36.1	54.0	8.7	1.2
Passage 2	33.1	51.6	11.0	4.3

[1]Because of rounding errors, the total of some percentages will not equal 100 exactly. Also, where differences from the national percentage are noted--as they are with the comprehension exercises--rounding errors, overlapping and missing categories, may cause a difference of 0.1% in some instances.

9-Year-Olds

Passage 1

READABILITY INDICES

9-Year-Olds Passage 1 "Elmer and the Dragon"

formula	approximate grade placement
Spache*	upper 4th
Lorge	mid 6th
Fog	high 6th
SMOG	low 8th

*For an explanation of readability formulae, the ingredients of each formula, and a comparison of grade level results of the formulae please see appendix A.

9-Year-Olds

Passage 2

READABILITY INDICES

9-Year-Olds Passage 2 "Armadillo"

formula	approximate grade placement
Spache	mid 7th
Lorge	mid 11th
Fog	high 12th
SMOG	mid 11th

DISTRIBUTION OF READING RATES

9-YEAR-OLDS PASSAGE 1

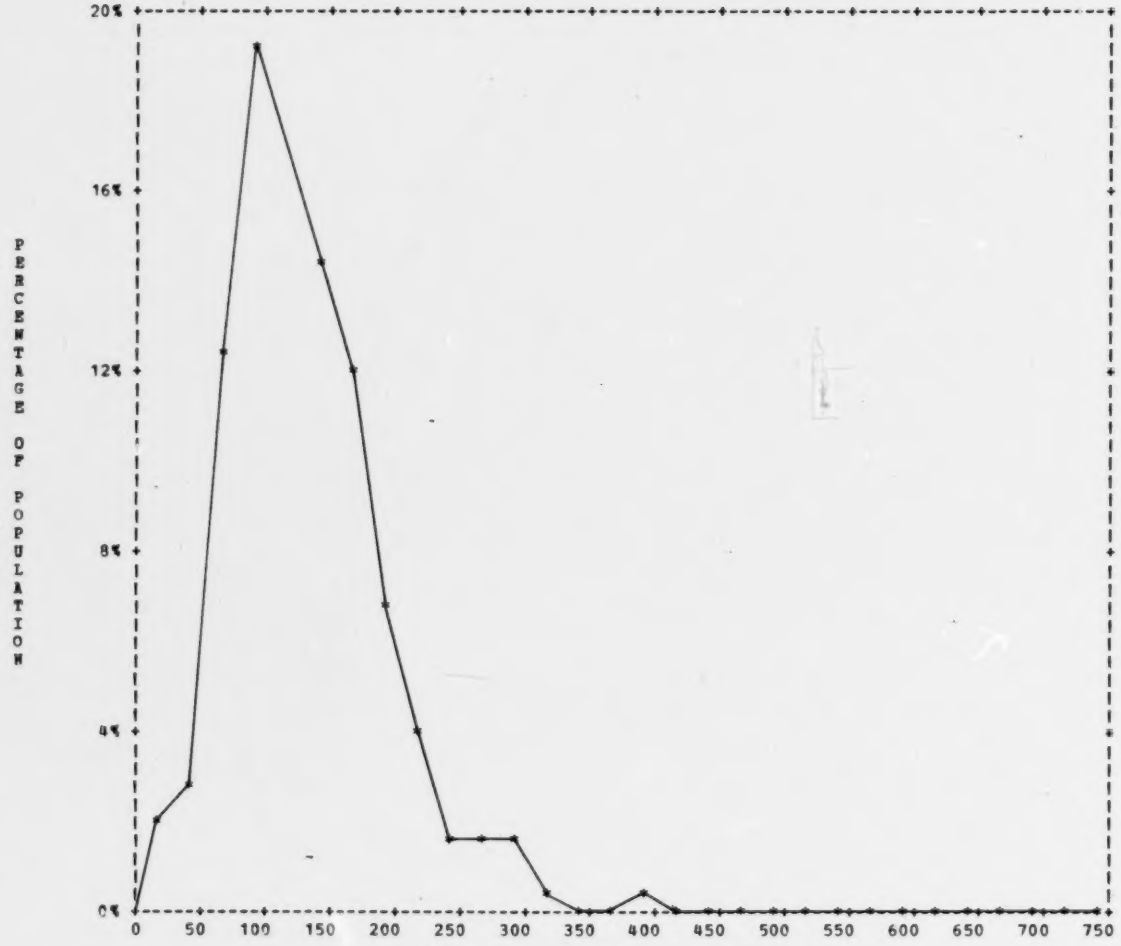


FIGURE 1-1

WORDS PER MINUTE	% IN EACH INTERVAL
0 to 25	1.8%
25 to 50	2.8%
50 to 75	12.2%
75 to 100	19.3%
100 to 125	21.0%
125 to 150	14.3%
150 to 175	12.1%
175 to 200	6.7%
200 to 225	4.1%
225 to 250	1.5%
250 to 275	1.7%
275 to 300	1.4%
300 to 325	0.3%
325 to 350	0.2%
350 to 375	0.1%
375 to 400	0.3%
400 to 425	0.1%
425 to 450	0.1%
450 to 475	0.0%
475 to 500	0.0%
500 to 525	0.0%
525 to 550	0.0%
550 to 575	0.1%
575 to 600	0.0%
600 to 625	0.0%
625 to 650	0.0%
650 to 675	0.0%
675 to 700	0.0%
700 to 725	0.0%
over 725	0.0%

DISTRIBUTION OF READING RATES

9-YEAR-OLDS PASSAGE 2

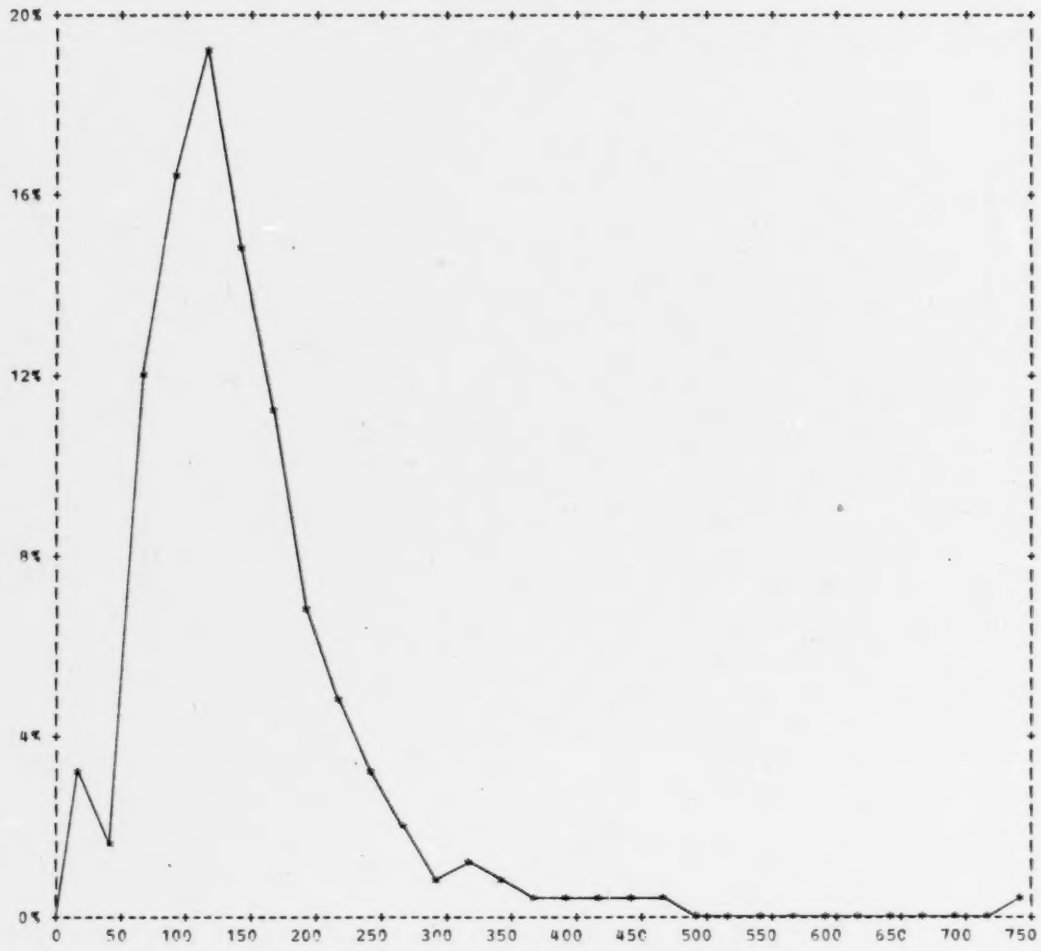


FIGURE 1-2

WORDS PER MINUTE	% IN EACH INTERVAL
0 to 25	3.1%
25 to 50	1.5%
50 to 75	11.9%
75 to 100	16.5%
100 to 125	19.0%
125 to 150	14.7%
150 to 175	11.3%
175 to 200	6.6%
200 to 225	4.7%
225 to 250	3.4%
250 to 275	1.9%
275 to 300	1.0%
300 to 325	1.1%
325 to 350	0.7%
350 to 375	0.3%
375 to 400	0.3%
400 to 425	0.5%
425 to 450	0.5%
450 to 475	0.4%
475 to 500	0.0%
500 to 525	0.0%
525 to 550	0.0%
550 to 575	0.1%
575 to 600	0.0%
600 to 625	0.1%
625 to 650	0.0%
650 to 675	0.0%
675 to 700	0.0%
700 to 725	0.0%
over 725	0.3%

Approximately one third of the students read at rates below 100 words per minute on Passage 1. Passage 2 showed similar results, as exhibit 1-1-1 indicates. About the same percentage of 9-year-olds (52%) read between 100 and 199 words per minute on the second passage as had read within that rate category on the first passage, but a larger percentage (15%) read in excess of 200 words per minute on the second passage. Less than 5% exceeded 300 words per minute on Passage 2.

Although Passage 2 was more difficult than Passage 1, the range of rates increased to between 0 and 1302 words per minute, with a median of 123 words per minute. The 75th percentile increased slightly to 169, and the 25th percentile increased to 88 words per minute. As figure 1-2 indicates, the largest percentage within any 25 words per minute interval was 19%--between 100 and 125 words per minute. The largest percentage within a 50-words per minute interval was 36%, between 75 and 125 words per minute. Sixty-two percent of the 9-year-olds read Passage 2 at speeds between 50 and 150 words per minute. Five readers exceeded 750 words per minute--they and other extremely fast readers will be discussed in a separate section later in this report.

About 22% read both passages at less than 100 words per minute; 36% read both passages between 100 and 199 words per minute; 3% read both passages between 200 and 299 words per minute; and less than 1% read both passages in excess of 300 words per minute. (See exhibit C-1 in appendix C.)

Comprehension

On the comprehension exercises,[2] 73% of the population of 9-year-olds answered four or more questions correctly on Passage 1. But on the more difficult second passage, as exhibit 1-1-2 shows,

Exhibit 1-1-2

National Results: Comprehension
Percentage of 9-Year-Olds in Each Comprehension Category

	3 or fewer correct	4 or more correct
Passage 1	(26.6)	(73.4)
Passage 2	(68.5)	(31.5)

[2]See appendix B for a copy of the comprehension exercises.

only 32% responded correctly to four or more of the five questions. Only 30% of the 9-year-olds answered four or more questions correctly on both passages (see exhibit D-1 in appendix D).

Comprehension within Rate

Larger percentages of 9-year-olds who read at the moderate rates of 100-199 words per minute scored four or more correct on the comprehension items than did those who read within the other rate categories. On Passage 1, as exhibit 1-1-3 shows, 81% of the 9-year-olds in the 100-199 words per minute category responded correctly to more than three items, while 67% who read in excess of 300 words per minute did so. On Passage 2, a higher percentage of students in the 100-199 words per minute category answered four or more correctly than in any other rate category, but the percentage was far below that for Passage 1 (37% versus 81%), as it was in all rate categories on Passage 2. On the more difficult second passage, only 12% of those who read at greater than 300 words per minute had four or more correct comprehension responses.

Exhibit 1-1-3

National Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
National					
3 or fewer correct	38.0	19.0	24.9	33.2	26.6
4 or more correct	62.0	81.0	75.1	66.8	73.4

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
National					
3 or fewer correct	71.5	63.1	77.3	88.1	68.5
4 or more correct	28.5	36.9	22.7	11.9	31.5

For 9-year-olds nationally as well as within every category (region, sex, race, etc.) the largest percentages of students who correctly answered four or more comprehension questions on both

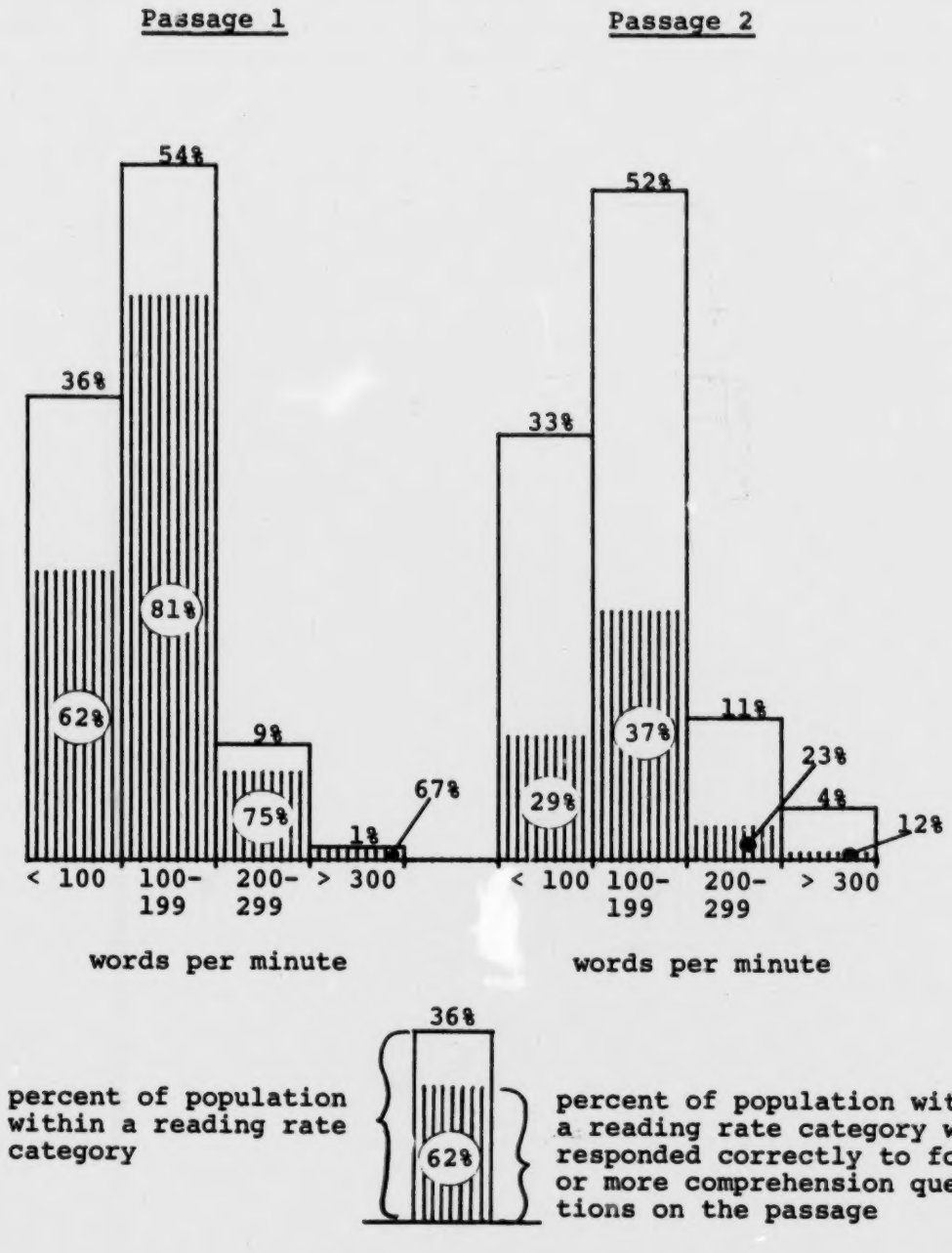
passages read both passages within the 100-199 words per minute category. The national figure was 50%, as can be observed in exhibit D-1 within appendix D. Of the 30% of the 9-year-olds who had four or more correct responses on both passages, 14% read both passages at less than 100 words per minute; 4% read within the 200-299 words per minute category; and less than 1% read both passages at 300 or more words per minute.

The relationship of the percentages of students scoring four or more correct to the percentages of students reading within the four rate categories is illustrated in the graph which follows.

Figure 1-3

COMPREHENSION WITHIN RATE

National: 9-Year-Olds



Results by Region

Reading Rate

Exhibit 1-2-1

Regional Results: Reading Rate
Percentage of 9-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	36.1	54.0	8.7	1.2
Northeast	36.5	53.2	9.9	0.4
*Difference	(0.4)	(-0.8)	(1.2)	(-0.8)
Southeast	42.5	48.5	8.2	0.7
Difference	(6.4)	(-5.5)	(-0.5)	(-0.5)
Central	30.5	60.6	7.6	1.4
Difference	(-5.6)	(6.6)	(-1.1)	(0.1)
West	37.1	51.2	9.2	2.5
Difference	(1.0)	(-2.8)	(0.6)	(1.2)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	33.1	51.6	11.0	4.3
Northeast	36.0	51.1	10.0	2.8
Difference	(2.9)	(-0.5)	(-0.9)	(-1.5)
Southeast	32.9	50.5	11.4	5.2
Difference	(-0.1)	(-1.2)	(0.4)	(0.9)
Central	32.3	52.7	11.3	3.6
Difference	(-0.7)	(1.1)	(0.3)	(-0.7)
West	30.7	51.9	11.2	6.2
Difference	(-2.4)	(0.3)	(0.3)	(1.8)

*Difference from national percentage.

When reading rate is examined by region, we find that for Passage 1 the Southeast contained a larger percentage of 9-year-

olds reading less than 100 words per minute--more than 6 percentage points above the percentage for the nation and the lowest percentage reading at 100-199 words per minute. The Central region, on the other hand, had a larger proportion of 9-year-olds--nearly 7 percentage points above the percentage for the country--reading between 100 and 199 words per minute, and a correspondingly low percentage within the 0 to 100 category. The differences between regions within most rate categories on Passage 2 was minimal, as exhibit 1-2-1 shows, though on both passages the West contained a larger percentage of 9-year-olds reading at rates in excess of 300 words per minute. On Passage 2, in the 300 or more words per minute category, the West's percentage is more than twice that for the Northeastern section of the nation.

Comprehension

On the comprehension exercises, the Southeastern 9-year-olds performed less well overall than those in other regions. Nine-year-olds in the Northeast performed best on both passages, with 34% scoring four or more on the comprehension exercises on both passages (see exhibit D-1 in appendix D). For each of the regions, the percentage having four or more correct answers on Passage 2 was less than half the corresponding percentage for Passage 1. Central and Western regions had similar percentages on both passages.

Comprehension within Rate

When the percentages of readers scoring four or more correct responses on the comprehension exercises are examined within reading rate categories, the Northeast shows the highest percentages in all rate categories on Passage 1 and in the 100-299 words per minute categories on Passage 2. Nine-year-olds from the Southeast had the lowest percentage having four or more correct responses in the 0-199 words per minute categories on Passage 1 and the lowest percentages in all rate categories on Passage 2. For the 200-299 words per minute category on Passage 2, the percentage for the Northeast was twice the percentage for the Southeast. In the 300 or more words per minute category, 9-year-olds from the Central region of the country exhibited the smallest percentage scoring four or more correct on the first passage (only 49% compared to 69% for the next lowest region); but on the second passage, the percentage for the Central region was not unlike that for the Northeast or Southeast. On Passage 2, however, the Western 9-year-olds had a far larger percentage in the >300 words per minute category.

Exhibit 1-2-2

Regional Results: Comprehension
Percentage of 9-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	26.6	73.4
Northeast	20.9	79.1
*Difference	(-5.7)	(5.7)
Southeast	34.6	65.4
Difference	(8.0)	(-8.0)
Central	25.1	74.9
Difference	(-1.4)	(1.4)
West	27.6	72.4
Difference	(1.1)	(-1.0)

Passage 2

	3 or fewer correct	4 or more correct
National	68.5	31.5
Northeast	65.0	35.0
Difference	(-3.5)	(3.5)
Southeast	71.7	28.3
Difference	(3.2)	(-3.2)
Central	68.7	31.3
Difference	(0.2)	(-0.2)
West	69.3	30.7
Difference	(0.8)	(-0.8)

*Difference from national percentage.

Among the 9-year-olds who correctly answered four or more comprehension questions on both passages, the largest percentages of them read within the 100-199 words per minute category on both passages, and Western 9-year-olds had the largest percentages in all three rate categories above 100 words per minute. For example, 58% of Western 9-year-olds who responded correctly to four or more comprehension questions on both passages read both passages at a rate between 100 and 199 words per minute in contrast to only 38% of the Southeast group who had performed in a similar manner. (See exhibit D-1 in appendix D.)

Exhibit 1-2-3

Regional Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	≤100	100-199	200-299	≥300	Total
Northeast					
3 or fewer correct	27.6	16.7	19.5	0.0	20.9
4 or more correct	72.4	83.3	80.5	100.0	79.1
Southeast					
3 or fewer correct	47.2	25.5	24.2	19.4	34.6
4 or more correct	52.8	74.5	75.8	80.6	65.4
Central					
3 or fewer correct	38.4	17.6	27.3	51.0	25.1
4 or more correct	61.6	82.4	72.7	49.0	74.9
West					
3 or fewer correct	39.7	18.3	29.5	30.8	27.6
4 or more correct	60.3	81.7	70.5	69.2	72.4

Exhibit 1-2-4

Regional Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Northeast					
3 or fewer correct	71.6	57.7	69.9	93.8	65.0
4 or more correct	28.4	42.3	30.1	6.2	35.0
Southeast					
3 or fewer correct	66.9	69.6	84.5	93.9	71.7
4 or more correct	33.1	30.4	15.5	6.1	28.3
Central					
3 or fewer correct	70.0	63.9	80.0	92.4	68.7
4 or more correct	30.0	36.1	20.0	7.6	31.3
West					
3 or fewer correct	78.1	62.0	74.5	76.8	69.3
4 or more correct	21.9	38.0	25.5	23.2	30.7

Results by Sex

Reading Rate

On both passages, 9-year-old girls had larger percentages than boys within the 100-299 words per minute categories, though on Passage 2 the difference between girls and boys was not as pronounced. Nearly twice as many girls as boys read between 200 and 299 words per minute on Passage 1. On that same passage, the percentage for males was about 11 points above that for females reading less than 100 words per minute; that difference decreased to 7 percentage points for Passage 2.

Exhibit 1-3-1

Sex Results: Reading Rate
Percentage of 9-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	36.1	54.0	8.7	1.2
Male	41.6	51.0	6.2	1.2
*Difference	(5.5)	(-3.0)	(-2.5)	(-0.0)
Female	30.4	57.1	11.3	1.2
Difference	(-5.7)	(3.1)	(2.6)	(0.0)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	33.1	51.6	11.0	4.3
Male	36.6	49.4	10.0	4.1
Difference	(3.5)	(-2.2)	(-1.0)	(-0.3)
Female	29.4	54.0	12.0	4.6
Difference	(-3.7)	(2.3)	(1.0)	(0.3)

*Difference from national percentage.

Comprehension

As exhibit 1-3-2 indicates, a larger percentage of girls responded correctly to four or more comprehension exercises than did boys on Passage 1; in contrast, the percentage for boys (34%) was larger than the percentage for girls (29%) on Passage 2.

Exhibit 1-3-2

Sex Results: Comprehension
Percentage of 9-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	26.6	73.4
Male	30.0	70.0
*Difference	(3.4)	(-3.4)
Female	23.0	77.0
Difference	(-3.6)	(3.6)

Passage 2

	3 or fewer correct	4 or more correct
National	68.5	31.5
Male	65.6	34.4
Difference	(-2.9)	(2.9)
Female	71.5	28.5
Difference	(3.1)	(-3.1)

*Difference from national percentage.

About 33% of the 9-year-old males and 28% of the females correctly answered four or more comprehension questions on both passages. (See exhibit D-1 in appendix D.)

Comprehension within Rate

On Passage 1, a greater percentage of females than males reading in all rate categories scored four or more correct on the comprehension exercises as the following exhibit shows. On Passage 2, the reverse occurred in three of the four rate categories: higher percentages of males occurred in each of the rate categories, except for the 300 or more words per minute category, where the percentage of females is more than three

times as great as the percentage of males. On Passage 1, in the 300 or more words per minute category, 84% of the females had high comprehension scores compared to 49% of the males.

When we examine the data according to males and females who read both passages within the same rate category--as is shown in exhibit C-1 in appendix C--we see that the percentages of males were larger than the percentages of females who had four or more correct comprehension responses on both passages and read within each of the first three rate categories. For the 2% of the male population of 9-year-olds who read both passages at 200-299 words per minute, 57% of them answered four or more comprehension

Exhibit 1-3-3

Sex Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	≤100	100-199	200-299	>300	Total
Male					
3 or fewer correct	40.3	20.9	31.6	50.6	30.0
4 or more correct	59.7	79.1	68.4	49.4	70.0
Female					
3 or fewer correct	34.8	17.3	21.0	15.6	23.0
4 or more correct	65.2	82.7	79.0	84.4	77.0

Passage 2

	Reading Rate				
	≤100	100-199	200-299	>300	Total
Male					
3 or fewer correct	67.9	59.8	73.8	94.7	65.6
4 or more correct	32.1	40.2	26.2	5.3	34.4
Female					
3 or fewer correct	76.2	66.2	80.3	82.0	71.5
4 or more correct	23.8	33.8	19.7	18.0	28.5

questions correctly on both passages; in comparison, out of the 4% of the females who read both passages within the 200-299 words per minute category, only 27% had acceptable (i.e., four or more correct) comprehension scores on both passages. The percentages are almost completely reversed within the >300 words per minute category.

Exhibit D-1 in appendix D shows that nearly identical percentages of 9-year-old males and females who had scored four or more on both passages read within the 100-199 and the 200-299 words per minute categories on both passages. However, more males than females (17% versus 10%) read less than 100 words per minute on both passages.

Results by Race

Reading Rate

On both passages, a greater percentage of Blacks in comparison with Whites read at less than 100 words per minute. For Passage 1 the percentage of Blacks (63%) was twice that of Whites for those reading at less than 100 words per minute; at the other end of the scale, the percentage of Whites was twice that of Blacks reading at rates in excess of 200 words per minute.

Exhibit 1-4-1

Race Results: Reading Rate
Percentage of 9-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	36.1	54.0	8.7	1.2
White	31.6	57.6	9.4	1.4
*Difference	(-4.5)	(3.6)	(0.7)	(0.2)
Black	63.1	32.3	4.6	0.1
Difference	(27.0)	(-21.7)	(-4.1)	(-1.1)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	33.1	51.6	11.0	4.3
White	31.9	53.9	10.5	3.7
Difference	(-1.2)	(2.3)	(-0.5)	(-0.6)
Black	40.5	38.1	14.0	7.3
Difference	(7.5)	(-13.5)	(3.0)	(3.0)

*Difference from national percentage.

Only 16% of the Black 9-year-olds read both passages within the 100-199 words per minute category in comparison with 39% of the Whites. Nearly 2% of the Blacks read both passages within the 200-299 words per minute category in comparison with 4% of the Whites. (See exhibit C-1 in appendix C.)

Comprehension

On the comprehension exercises, 78% of the Whites compared to only 44% of the Blacks responded correctly to four or more questions on Passage 1; the percentage of Whites with four or more correct responses was more than twice the percentage of Blacks on Passage 2. (See exhibit 1-4-2.) For both Black and White 9-year-olds, the percentages scoring four or more correct on the comprehension exercises on Passage 2 were considerably below that for Passage 1. For example, the percentage for Blacks on Passage 2 was only one third that for Blacks on Passage 1.

Exhibit 1-4-2

Race Results: Comprehension
Percentage of 9-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	26.6	73.4
White	21.6	78.4
*Difference	(-4.9)	(4.9)
Black	55.7	44.3
Difference	(29.1)	(-29.1)

Passage 2

	3 or fewer correct	4 or more correct
National	68.5	31.5
White	65.5	34.5
Difference	(-3.0)	(3.0)
Black	86.0	14.0
Difference	(17.5)	(-17.5)

*Difference from national percentage.

Exhibit D-1 in appendix D reveals that 33% of the White 9-year-olds correctly answered four or more comprehension questions on both passages while only 13% of the Blacks did so.

Comprehension within Rate

As exhibit 1-4-1 revealed, a larger percentage of Blacks read at high rates than did Whites on Passage 2. While only 0.1% of 9-year-old Blacks read in excess of 300 words per minute

on the first passage, 7% read in that rate category on the second passage--twice the percentage of Whites on Passage 2. However, a smaller percentage of Blacks obtained high scores on the comprehension exercises in comparison to Whites as shown in exhibit 1-4-3 which follows. On Passage 1, 68% of the White students who read at 300 or more words per minute answered four or more of the comprehension exercises correctly in contrast to less than 1% of the Black students who read at that rate. For those reading at rates in excess of 300 words per minute on the second passage, the percentage of Black students scoring four or more was 5% compared to 14% of the White students.

In all rate categories on both passages, Whites with four or more correct comprehension responses exhibited larger percentages

Exhibit 1-4-3

Race Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	≤100	100-199	200-299	>300	Total
White					
3 or fewer correct	30.8	16.2	22.6	32.5	21.6
4 or more correct	69.2	83.8	77.4	67.5	78.4
Black					
3 or fewer correct	59.2	47.8	62.2	100.0	55.7
4 or more correct	40.8	52.2	37.8	0.0	44.3

Passage 2

	Reading Rate				
	≤100	100-199	200-299	>300	Total
White					
3 or fewer correct	67.7	60.6	76.5	86.2	65.5
4 or more correct	32.3	39.4	23.5	13.8	34.5
Black					
3 or fewer correct	88.6	82.7	82.2	95.3	86.0
4 or more correct	11.4	17.3	17.8	4.7	14.0

than Blacks. The highest percentages within any rate category for both Black and White 9-year-olds was within the 100-199 words per minute category.

Approximately one third of the Black 9-year-olds read both passages at less than 100 words per minute. Of those, only 7% responded to four or more of the comprehension exercises correctly on both passages. The percentage for comparable comprehension scores on both passages for White 9-year-olds was 22%. Exhibit C-1 in appendix C also shows that percentages for Whites in the other rate categories were about twice those for Blacks.

Results by Parental Education

Reading Rate

The results for Passage 1 show that a larger percentage of students whose parents had post high school education read between 200 and 299 words per minute than did those whose parents had less education. Specifically, 12% of the "post high school" group read at 200-299 words per minute as opposed to only 5% of those in the "no high school" group. At the other end of the spectrum, only 27% of the 9-year-olds whose parents had post high school education appeared in the less than 100 words per minute category, compared to 47% of those whose parents had some high school.

Exhibit 1-5-1

Parental Education Results: Reading Rate
Percentage of 9-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	36.1	54.0	8.7	1.2
No High School	41.2	51.9	4.9	1.9
*Difference	(5.1)	(-2.0)	(-3.8)	(0.7)
Some High School	47.0	45.0	6.5	1.5
Difference	(10.9)	(-8.9)	(-2.2)	(0.3)
Graduated High School	31.1	59.2	9.0	0.6
Difference	(-5.0)	(5.3)	(0.3)	(-0.6)
Post High School	27.4	58.9	11.9	1.8
Difference	(-8.7	(4.9)	(3.2)	(0.6)

Passage 2

Reading Rate

	≤100	100-199	200-299	≥300
National	33.1	51.6	11.0	4.3
No High School	34.6	50.2	12.3	3.0
Difference	(1.5)	(-1.5)	(1.3)	(-1.4)
Some High School	37.6	45.9	7.9	8.5
Difference	(4.6)	(-5.7)	(-3.1)	(4.2)
Graduated High School	30.1	52.1	13.5	4.3
Difference	(-3.0)	(0.5)	(2.6)	(-0.0)
Post High School	27.0	58.3	10.2	4.5
Difference	(-6.0)	(6.7)	(-0.8)	(0.2)

*Difference from national percentage.

As the above exhibit reports, the "post high school" group percentages remained much the same for Passage 2 as they were for Passage 1. However, the other groups had lower percentages in the less than 100 words per minute category and higher percentages in the 200 or more words per minute categories for Passage 2. For instance, only 7% of the "no high school" group read the first passage at 200 words per minute or faster, but 15% of that group read the second passage in excess of 200 words per minute.

Only about 4% or less of any group read both passages at a rate between 200 and 299 words per minute, with the "no high school" group having the largest percentage. On the other hand, the "post high school" group of 9-year-olds had the largest percentage (42%) who read both passages at a rate between 100 and 199 words per minute, while the "no high school" group in the 100-199 rate category had the second lowest percentage (32%). (See exhibit C-1 in appendix C.)

Comprehension

On both passages, the percentage of 9-year-olds responding correctly to four or more comprehension exercises (see exhibit 1-5-2) increased as the level of parental education increased, although the comprehension levels were generally about 40 percentage points lower on Passage 2. On Passage 1, 52% of the 9-year-olds whose parents had no high school education scored

four or more correct, in comparison to 82% for those whose parents had post high school education. On the more difficult second passage, as exhibit 1-5-2 shows, comprehension scores dropped in all educational categories; however, the decrease for 9-year-olds from the highest educational background was about half (from 82% to 40%), while all other groups decreased by more than half--for example, the "graduated from high school" group decreased from 77% to 33%. Only 18% of the students from

Exhibit 1-5-2

Parental Education Results: Comprehension
Percentage of 9-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	26.6	73.4
No High School	48.5	51.5
*Difference	(21.9)	(-21.9)
Some High School	41.6	58.4
Difference	(15.0)	(-15.0)
Graduated High School	23.4	76.6
Difference	(-3.2)	(3.2)
Post High School	18.0	82.0
Difference	(-8.6)	(8.6)

Passage 2

	3 or fewer correct	4 or more correct
National	68.5	31.5
No High School	82.4	17.6
Difference	(13.9)	(-13.9)
Some High School	77.7	22.3
Difference	(9.2)	(-9.2)
Graduated High School	66.8	33.2
Difference	(-1.7)	(1.7)
Post High School	60.3	39.7
Difference	(-8.1)	(8.1)

*Difference from national percentage.

the lowest educational background answered four or more of the five exercises correctly.

Comprehension within Rate

At all parental education levels, a higher percentage of 9-year-olds in the 100-199 words per minute category answered four or more comprehension questions correctly on Passage 1 than did so in any other rate category. Except for the >300 words per minute category, percentages having four or more correct increased as the level of parental education increased on Passage 1. On Passage 2, that increase can be seen in exhibit 1-5-4 within the 0-199 words per minute categories, though not for the higher rates. Students whose parents had post high school education exhibited the largest percentages of "4 or more correct"

Exhibit 1-5-3

Parental Education Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
No High School					
3 or fewer correct	56.7	41.8	69.9	0.0	48.5
4 or more correct	43.3	58.2	30.1	100.0	51.5
Some High School					
3 or fewer correct	57.7	24.8	28.3	100.0	41.6
4 or more correct	42.3	75.2	71.7	0.0	58.4
Graduated High School					
3 or fewer correct	35.5	14.9	35.7	43.9	23.4
4 or more correct	64.5	85.1	64.3	56.1	76.6
Post High School					
3 or fewer correct	27.4	14.7	12.5	16.3	18.0
4 or more correct	72.6	85.3	87.5	83.7	82.0

in all comprehension within rate categories on both passages with the exception of the >300 category for the "no high school" group on the first passage.

Exhibit 1-5-4

Parental Education Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
No High School					
3 or fewer correct	78.3	85.4	77.5	100.0	82.4
4 or more correct	21.7	14.6	22.5	0.0	17.6
Some High School					
3 or fewer correct	77.1	74.1	85.3	92.7	77.7
4 or more correct	22.9	25.9	14.7	7.3	22.3
Graduated High School					
3 or fewer correct	68.4	59.5	83.2	92.0	66.8
4 or more correct	31.6	40.5	16.8	8.0	33.2
Post High School					
3 or fewer correct	61.2	56.9	64.2	90.5	60.3
4 or more correct	38.8	43.1	35.8	9.5	39.7

In the highest rate category for Passage 1, 100% of the small number of 9-year-olds whose parents had no high school education scored four or more correct on the comprehension exercises; however, on Passage 2, less than 1% of the students from that same educational background who read 300 or more words per minute scored four or more correct. Students whose parents had some high school education and who were reading at 300 or more words per minute had less than 1% of their group scoring four or more correct on Passage 1; on Passage 2, 9-year-olds from that same parental education group and reading at 300 or more words per minute increased to 7% the proportion of their group scoring four or more correct, nearly the same as the percentage for other groups. In most cases, the highest percentages occurred in the

100-199 words per minute rate category. One exception was for the students whose parents had no high school education--the highest percentage for their group on Passage 2 (23%) was in the 200-299 words per minute category as compared to 15% for that group in the 100-199 words per minute category. A second exception, though less pronounced, was for the "post high school" group on Passage 1, where 88% of the 9-year-olds reading at 200-299 words per minute answered four or more comprehension questions as opposed to 85% in the 100-199 words per minute category.

When the results are examined according to 9-year-olds who read both passages within the same rate category and correctly answered four or more comprehension questions on both passages, percentages of 9-year-olds with acceptable (i.e., four or more) comprehension scores increase as parental education increases within the less than 100 words per minute category. Within the 100-199 words per minute category on both passages, "graduated high school" and "post high school" groups are similar (48% and 45%), with "no high school" far behind at 19%. Within the 200-299 rate category, the "post high school" group again was highest with 55% and "graduated high school" lowest in that rate category with only 25% having four or more correct responses on the comprehension exercises on both passages. (See exhibit C-1 in appendix C.)

Results by Size-and-Type of Community

Reading Rate

The largest percentage of 9-year-olds who read at less than 100 words per minute on both passages occurred in the "extreme inner city" category. On Passage 2 they were 20 percentage points above the national percentage for that rate. The majority of students in all other STOC categories read at rates between 100 and 199 words per minute on both passages. In general, a larger percentage of 9-year-olds in each STOC category read at rates in excess of 200 words per minute for Passage 2 than did for Passage 1. The increases were minimal for "affluent suburbs,"

Exhibit 1-6-1

Size-and-Type of Community Results: Reading Rate
Percentage of 9-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	36.1	54.0	8.7	1.2
Extreme Rural	38.6	56.8	4.5	0.1
*Difference	(2.5)	(2.8)	(-4.2)	(-1.1)
Extreme Inner City	56.0	36.1	7.8	0.0
Difference	(19.9)	(-17.8)	(-0.9)	(-1.2)
Extreme Affluent Suburb	29.7	59.1	9.5	1.7
Difference	(-6.4)	(5.1)	(0.8)	(0.5)
Rest of Big City	29.1	59.8	10.6	0.5
Difference	(-7.0)	(5.8)	(1.9)	(-0.7)
Suburban Fringe	37.6	51.8	8.8	1.8
Difference	(1.5)	(-2.2)	(0.1)	(0.6)
Medium City	32.2	57.6	8.9	1.4
Difference	(-3.9)	(3.6)	(0.2)	(0.1)
Small City	37.6	51.8	9.0	1.5
Difference	(1.5)	(-2.2)	(0.3)	(0.3)

*Difference from national percentage.

slight for "small cities" and "suburban fringes," somewhat greater for "rest of big city," but very large for "medium cities" (from 10% to 21%), "inner cities" (from 8% to 20%), and "rural" categories (from 5% to 17%). The least variation between Passage 1 and Passage 2 in percentage of 9-year-olds reading at less than 100 words per minute occurred in the "suburban fringe" and "small city" groups, while the greatest decrease in percentages occurred in the "inner city" group.

Exhibit 1-6-2

Size-and-Type of Community Results: Reading Rate
Percentage of 9-Year-Olds in Each Rate Category

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	33.1	51.6	11.0	4.3
Extreme Rural	33.5	49.2	13.6	3.8
*Difference	(0.4)	(-2.5)	(2.6)	(-0.6)
Extreme Inner City	44.6	35.0	15.4	5.0
Difference	(11.5)	(-16.7)	(4.4)	(0.7)
Extreme Affluent Suburb	33.4	54.7	8.0	3.9
Difference	(0.3)	(3.1)	(-3.0)	(-0.4)
Rest of Big City	23.6	60.2	12.3	3.8
Difference	(-9.5)	(8.6)	(1.4)	(-0.5)
Suburban Fringe	37.7	49.2	9.3	3.8
Difference	(4.6)	(-2.4)	(-1.7)	(-0.5)
Medium City	29.4	50.0	14.1	6.5
Difference	(-3.6)	(-1.6)	(3.1)	(2.1)
Small City	33.4	54.4	8.6	3.6
Difference	(0.3)	(2.8)	(-2.3)	(-0.8)

*Difference from national percentage.

The "rest of big city" and the "affluent suburb" groups contained the largest percentages in the 100 to 299 words per minute categories on Passage 1. "Small city" and "suburban fringe" groups exhibited almost identical percentages in all rate categories on Passage 1 and similar percentages on Passage 2, except that the "small city" group contained a somewhat larger percentage in the 100-199 words per minute category. The "rest

of big city" and "affluent suburb" groups contained almost identical percentages of 9-year-olds in all rate categories for Passage 1 and similar percentages for Passage 2, except that for Passage 2 the "rest of big city" group had somewhat larger percentages in the 100-199 and 200-299 words per minute categories.

In examining exhibit C-1 in appendix C, we note that the "rest of big city" and the "affluent suburb" groups had the largest percentages (above 40%) who read both passages within the 100-199 words per minute category. The "inner city" group showed the lowest percentage (20%) reading both passages within that category. However, 4% of the "inner city" 9-year-olds read both passages within the 200-299 words per minute category--the largest percentage reading both passages within that rate! Within that 200-299 rate category, "rural," "suburban fringe," and "small city" youngsters had the smallest percentages, about half of the percentage for the "inner city" group.

Comprehension

On the comprehension exercises, a smaller percentage of "inner city" and "rural" 9-year-olds (55% and 67%, respectively) answered four or more questions correctly for Passage 1. A larger percentage of "affluent suburb" students (84%) responded correctly to four or more of the exercises for the first passage and had the largest percentage (40%) on the second passage. On Passage 2 the "inner city" group again performed less well than the other groups: only 18% answered more than three questions correctly. As exhibit 1-6-3 indicates below, from Passage 1 to Passage 2 the percentage answering four or more correctly decreased by slightly more than 50% for most STOC categories. For "extreme rural," "extreme inner city," and "medium city" 9-year-olds the decrease was by nearly two thirds. The greatest decrease was for "inner city" 9-year-olds, from 55% answering four or more correctly on Passage 1 to only 18% on Passage 2.

Thirty-eight percent of the 9-year-olds in the "affluent suburb" group had four or more correct responses on the comprehension exercises on both passages--the largest percentage within any of the STOC groups--followed closely by the "rest of big city" group with 37%. Only 15% of the "inner city" 9-year-olds scored four or more on both passages. Of that "inner city" group, 21% of them had read both passages at rates less than 100 words per minute, and 41% had read both passages within the 100-199 words per minute category. (Exhibit D-1 in appendix D shows the relationship of the percentages of those groups with other STOC groups.)

Exhibit 1-6-3

Size-and-Type of Community Results: Comprehension
Percentage of 9-Year-Olds in Each Comprehension Category

	Passage 1	
	3 or fewer correct	4 or more correct
National	26.6	73.4
Extreme Rural	32.7	67.3
*Difference	(6.1)	(-6.1)
Extreme Inner City	45.3	54.7
Difference	(18.7)	(-18.7)
Extreme Affluent Suburb	15.7	84.3
Difference	(-10.9)	(10.9)
Rest of Big City	26.4	73.6
Difference	(-0.2)	(0.2)
Suburban Fringe	22.8	77.2
Difference	(-3.7)	(3.7)
Medium City	28.0	72.0
Difference	(1.5)	(-1.5)
Small City	25.9	74.1
Difference	(-0.6)	(0.6)

	Passage 2	
	3 or fewer correct	4 or more correct
National	68.5	31.5
Extreme Rural	74.3	25.7
Difference	(5.8)	(-5.8)
Extreme Inner City	82.4	17.6
Difference	(13.9)	(-13.9)
Extreme Affluent Suburb	59.6	40.4
Difference	(-8.9)	(8.9)
Rest of Big City	62.1	37.9
Difference	(-6.3)	(6.3)
Suburban Fringe	66.9	33.1
Difference	(-1.6)	(1.6)
Medium City	72.5	27.5
Difference	(4.0)	(-4.0)
Small City	67.7	32.3
Difference	(-0.8)	(0.8)

*Difference from national percentage.

Comprehension within Rate

For comprehension within rate (see exhibit 1-6-4 and 1-6-5), the extreme inner city students performed less well than all other areas on both passages. On Passage 2, for those students who read at rates in excess of 300 words per minute, less than 1% of the students from the "extreme rural," "extreme inner city," or "suburban fringe" groups correctly answered four or more questions on the comprehension exercises.

With few exceptions, the highest comprehension percentages (for four or more correct) on both passages were within the 100-199 words per minute rate category. On Passage 1 the highest percentage was within the 100-199 words per minute category; that percentage (91%) was attained by 9-year-olds in the "affluent suburb" group. For Passage 2, the highest percentage (46%) having four or more correct answers was within the same rate category but was attained by students from the "inner fringe."

For those 9-year-olds in the "inner city" group who read both passages at less than 100 words per minute, only 9% of them correctly answered four or more of the comprehension exercises, in contrast to 16% for "rural," 18% for "medium city," and a high of 28% for "suburban fringe" 9-year-olds. For those who read both passages within the 100-199 words per minute category--as shown in exhibit C-1 in appendix C--31% of the "inner city" 9-year-olds, 47% of the "affluent suburb," and 56% of the "rest of big city" 9-year-olds responded correctly to more than three comprehension questions on both passages. The "affluent suburb" and the "inner city" youngsters who read within the 200-299 rate category on both passages had identical percentages having acceptable (i.e., four or more) comprehension scores on both passages, in comparison with 73% for "rural" and 16% for "suburban fringe" 9-year-olds who read in the same rate category on both passages. (The size of the groups and the errors of measurement make comparisons unreliable for 9-year-olds within the more than 300 words per minute category.)

Exhibit 1-6-4

Size-and-Type of Community Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Extreme Rural					
3 or fewer correct	50.3	20.4	37.8	0.0	32.7
4 or more correct	49.7	79.6	62.2	100.0	67.3
Extreme Inner City					
3 or fewer correct	52.8	35.2	38.2	0.0	45.3
4 or more correct	47.2	64.8	61.8	0.0	54.7
Extreme Affluent Suburb					
3 or fewer correct	22.6	9.0	35.0	21.2	15.7
4 or more correct	77.4	91.0	65.0	78.8	84.3
Rest of Big City					
3 or fewer correct	34.8	20.9	34.3	23.8	26.4
4 or more correct	65.2	79.1	65.7	76.2	73.6
Suburban Fringe					
3 or fewer correct	30.9	16.8	25.0	16.1	22.8
4 or more correct	69.1	83.2	75.0	83.9	77.2
Medium City					
3 or fewer correct	39.9	22.2	16.0	71.9	28.0
4 or more correct	60.1	77.8	84.0	28.1	72.0
Small City					
3 or fewer correct	37.7	18.9	16.7	29.9	25.9
4 or more correct	62.3	81.1	83.3	70.1	74.1

Exhibit 1-6-5

Size-and-Type of Community Results: Comprehension Within Rate
Percentage of 9-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Extreme Rural					
3 or fewer correct	77.4	66.9	86.6	100.0	74.3
4 or more correct	22.6	33.1	13.4	0.0	25.7
Extreme Inner City					
3 or fewer correct	87.5	75.6	77.2	100.0	82.4
4 or more correct	12.5	24.4	22.8	0.0	17.6
Extreme Affluent Suburb					
3 or fewer correct	65.0	56.1	62.9	56.8	59.6
4 or more correct	35.0	43.9	37.1	43.2	40.4
Rest of Big City					
3 or fewer correct	75.7	53.8	74.9	69.7	62.1
4 or more correct	24.3	46.2	25.1	30.3	37.9
Suburban Fringe					
3 or fewer correct	63.9	64.8	76.6	100.0	66.9
4 or more correct	36.1	35.2	23.4	0.0	33.1
Medium City					
3 or fewer correct	71.8	67.1	85.1	90.4	72.5
4 or more correct	28.2	32.9	14.9	9.6	27.5
Small City					
3 or fewer correct	70.7	63.6	71.4	92.3	67.7
4 or more correct	29.3	36.4	28.6	7.7	32.3

CHAPTER 2

13-YEAR-OLDS

National Results

Reading Rate

The results on the first passage for 13-year-olds show a median reading rate of 173 words per minute. The rates ranged from 0 to 701 words per minute, with 13-year-olds at the upper quartile (75th percentile) reading 217 words per minute and those at the lower quartile (25th percentile) reading 133 words per minute.

As figure 2-1 indicates, nearly 17% of the 13-year-olds read Passage 1 at a rate between 150 and 175 words per minute--the highest percentage for any 25 words per minute rate category. Approximately 78% of the students read between 100 and 250 words per minute. The highest percentage within an interval of 100 words per minute was 58%--between 125 and 225 words per minute. The largest percentage within a 50 words per minute interval was slightly more than 31%--between 150 and 200 words per minute.

Less than 10% of the 13-year-olds read the first passage at less than 100 words per minute; slightly over half read between 100 and 200 words per minute; and less than 4% read faster than 300 words per minute, as exhibit 2-1-1 indicates.

Exhibit 2-1-1

National Results: Reading Rate
Percentage of 13-Year-Olds in Each Rate Category

	Reading Rate			
	<100	100-199	200-299	>300
Passage 1	9.7	56.7	29.7	3.8
Passage 2	11.0	59.3	24.2	5.4

13-Year-Olds

Passage 1

READABILITY INDICES

13-Year-Olds Passage 1 "An Expensive Experiment"

formula	approximate grade placement
Fog	upper 5th
SMOG	mid 5th
Dale-Chall	mid 5th

13-Year-Olds

Passage 2

READABILITY INDICES

13-Year-Olds Passage 2 "Physical Geology"

formula	approximate grade placement
Fog	mid 11th
SMOG	low 11th
Dale-Chall	upper 10th

DISTRIBUTION OF READING RATES

13-YEAR-OLDS PASSAGE 1

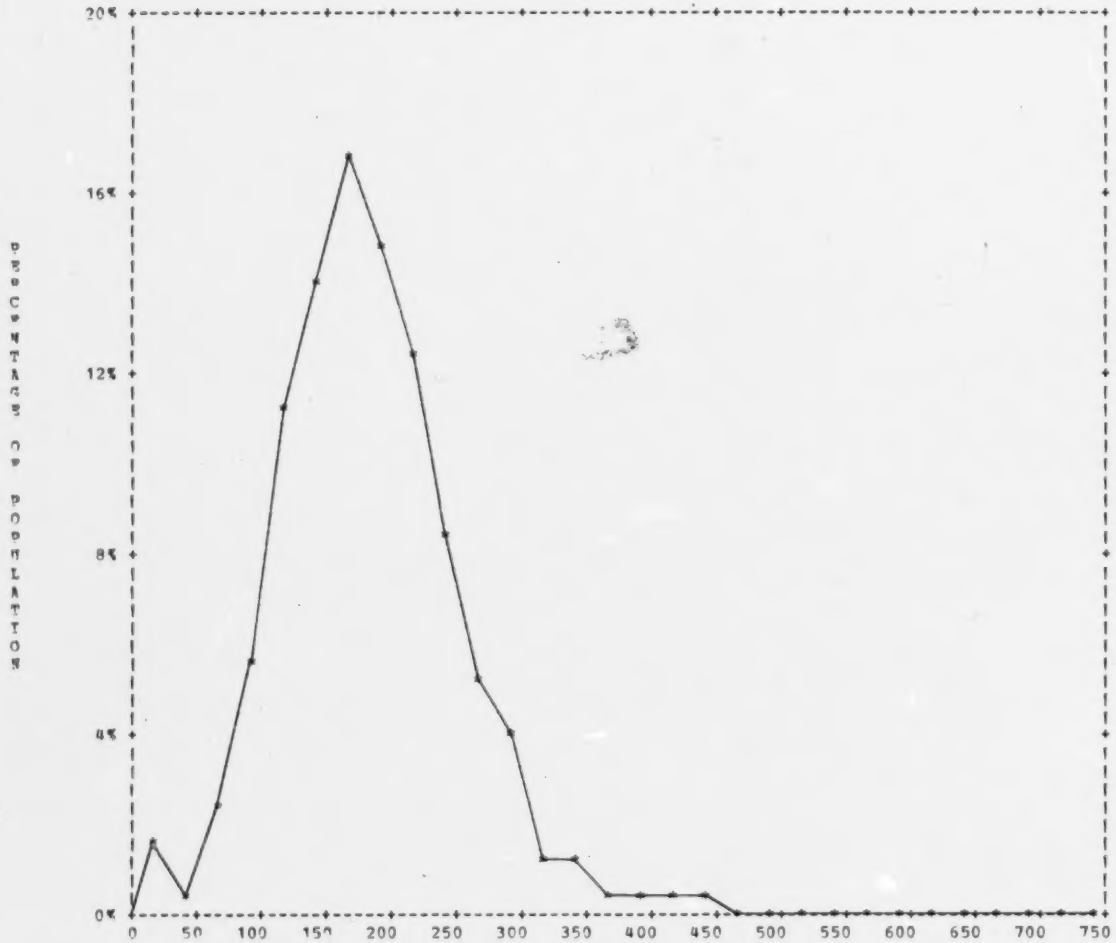


FIGURE 2-1

WORDS PER MINUTE	% IN EACH INTERVAL
0 to 25	1.6%
25 to 50	0.3%
50 to 75	2.4%
75 to 100	5.4%
100 to 125	11.2%
125 to 150	14.1%
150 to 175	16.7%
175 to 200	14.7%
200 to 225	12.5%
225 to 250	8.3%
250 to 275	5.1%
275 to 300	3.8%
300 to 325	1.0%
325 to 350	1.2%
350 to 375	0.5%
375 to 400	0.3%
400 to 425	0.3%
425 to 450	0.3%
450 to 475	0.0%
475 to 500	0.0%
500 to 525	0.0%
525 to 550	0.0%
550 to 575	0.0%
575 to 600	0.0%
600 to 625	0.0%
625 to 650	0.1%
650 to 675	0.0%
675 to 700	0.0%
700 to 725	0.1%
over 725	0.0%

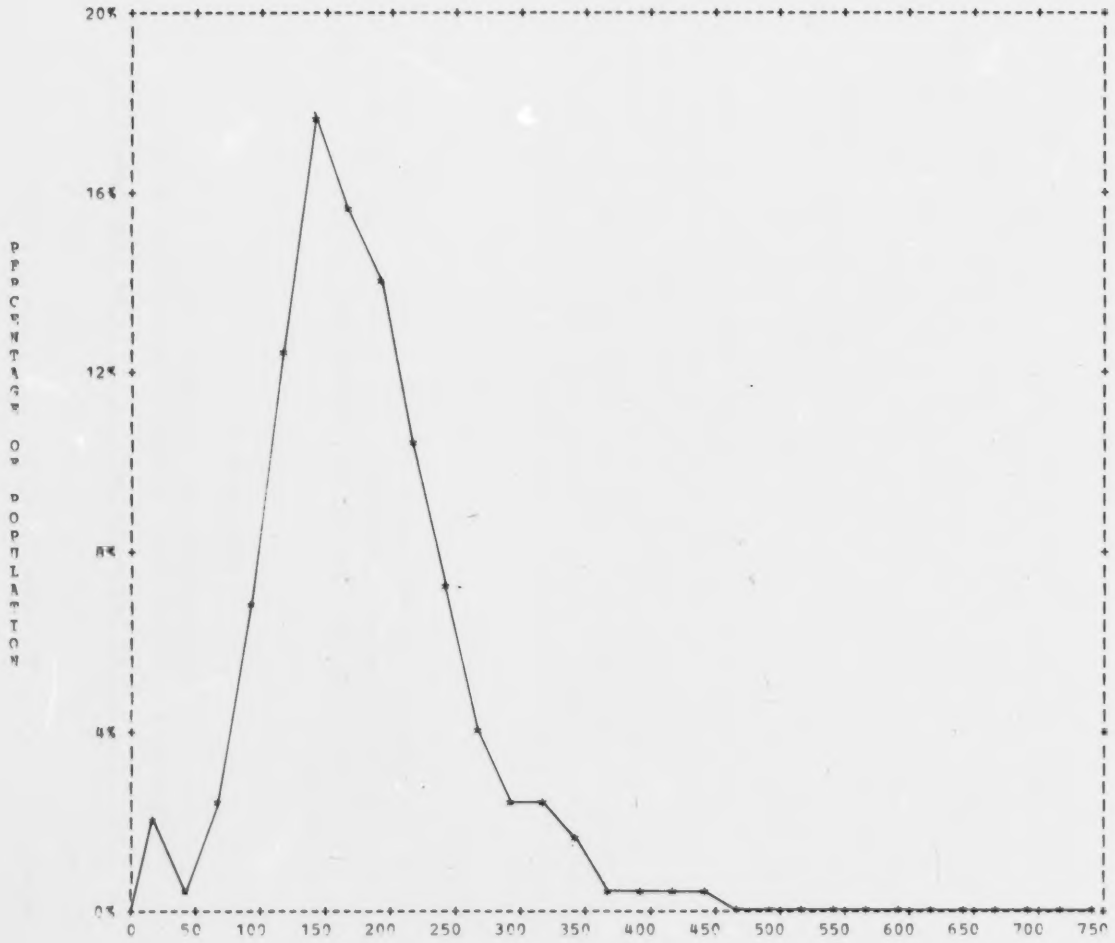


FIGURE 2-2

WORDS PER MINUTE	% IN EACH INTERVAL
0 to 25	2.0%
25 to 50	0.2%
50 to 75	2.2%
75 to 100	6.6%
100 to 125	12.3%
125 to 150	17.4%
150 to 175	15.7%
175 to 200	13.8%
200 to 225	10.6%
225 to 250	7.2%
250 to 275	4.0%
275 to 300	2.5%
300 to 325	2.2%
325 to 350	1.4%
350 to 375	0.5%
375 to 400	0.5%
400 to 425	0.3%
425 to 450	0.3%
450 to 475	0.1%
475 to 500	0.0%
500 to 525	0.0%
525 to 550	0.0%
550 to 575	0.0%
575 to 600	0.0%
600 to 625	0.0%
625 to 650	0.0%
650 to 675	0.0%
675 to 700	0.0%
700 to 725	0.0%
over 725	0.1%

Although the second passage for each age group was more difficult to read than the first, percentages of 9-year-olds reading at higher rates had increased. For 13-year-olds, however, an increase did not occur in the 200-299 words per minute category on the more difficult second passage. But, as exhibit 2-1-1 illustrates, percentages did increase in all other rate categories for 13-year-olds. The median reading rate for Passage 2 decreased to 165 words per minute as compared to 173 for Passage 1. The range on Passage 2 was from 0 to 991 words per minute - higher than on Passage 1 - with a reading rate of 128 words per minute at the 25th percentile and 212 words per minute at the 75th percentile.

Approximately 11% of the 13-year-olds read Passage 2 at less than 100 words per minute, 59% read between 100 and 199 words per minute, and about 5% read faster than 300 words per minute. Slightly more than three quarters of the 13-year-olds read Passage 2 between 100 and 250 words per minute. The largest percentage within a 25 words per minute rate interval was about 17%--between 125 and 150 words per minute. The largest percentage within a 50 words per minute interval was 33%--within the 125 to 175 words per minute interval. A lesser percentage (30%) of 13-year-olds read in excess of 200 words per minute on the second passage than read at that rate on the first passage (34%).

When 13-year-olds who read both passages within the same rate category are examined, we find that 7% read both passages at rates below 100 words per minute, 45% read both passages between 100 and 199 words per minute, 16% read both passages between 200 and 299 words per minute, and 3% read both passages in excess of 300 words per minute. (The remaining 29% did not read both passages within the same rate category.) (See exhibit C-2 in appendix C.)

Comprehension

On both passages, as exhibit 2-1-2 notes, less than half of the 13-year-olds responded correctly to four or more comprehension exercises. The percentage doing so decreased from 40% on Passage 1 to 35% on Passage 2.

Exhibit 2-1-2

National Results: Comprehension
Percentage of 13-Year-Olds in Each Comprehension Category

	3 or fewer correct	4 or more correct
Passage 1	(59.8)	(40.2)
Passage 2	(65.1)	(34.9)

Only 18% of the 13-year-olds responded correctly to four or more comprehension questions on both passages. Of that group, 45% read both passages within the 100-199 words per minute category and 23% read within the 200-299 words per minute category on both passages. About 4% read both passages at rates less than 100 words per minute, while less than 3% read both passages at 300 or more words per minute. (See exhibit D-2 in appendix D.)

Comprehension within Rate

The decrease from Passage 1 to Passage 2 in the percentage of 13-year-olds who answered four or more comprehension questions correctly can be observed in more detail in exhibit 2-1-3 which discloses the percentage of students making high comprehension scores within each rate category. On the more difficult second passage, the percentages of students correctly answering four or more questions decreased from the first passage in all three rate categories above 100 words per minute. Only 26% of the 13-year-olds who read at a rate in excess of 300 words per minute answered four or more comprehension questions correctly on Passage 2 in contrast to nearly 48% of those who read Passage 1 at that same rate. The contrast between passages was not very great for those who read at a rate between 100 and 199 words per minute. However, the percentage of students with four or more correct responses within the less than 100 words per minute category increased from 19% on Passage 1 to 27% on Passage 2.

Only 12% of the 13-year-olds who read both passages at less than 100 words per minute correctly answered four or more comprehension questions on both passages. Nearly 18% of those who read both passages within the 100-199 words per minute category answered four or more correctly on both passages. About the same percentage (17%) who read 300 or more words per minute had four or more right answers on both passages. The largest percentage--25%--was for those 13-year-olds who had read within the 200-299 words per minute category on both passages.

The relationship of the percentages of students scoring four or more correct to the percentages of students reading within the four rate categories is illustrated in the graph which follows.

Exhibit 2-1-3

National Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
National					
3 or fewer correct	81.3	62.7	48.1	52.3	59.8
4 or more correct	18.7	37.3	51.9	47.7	40.2

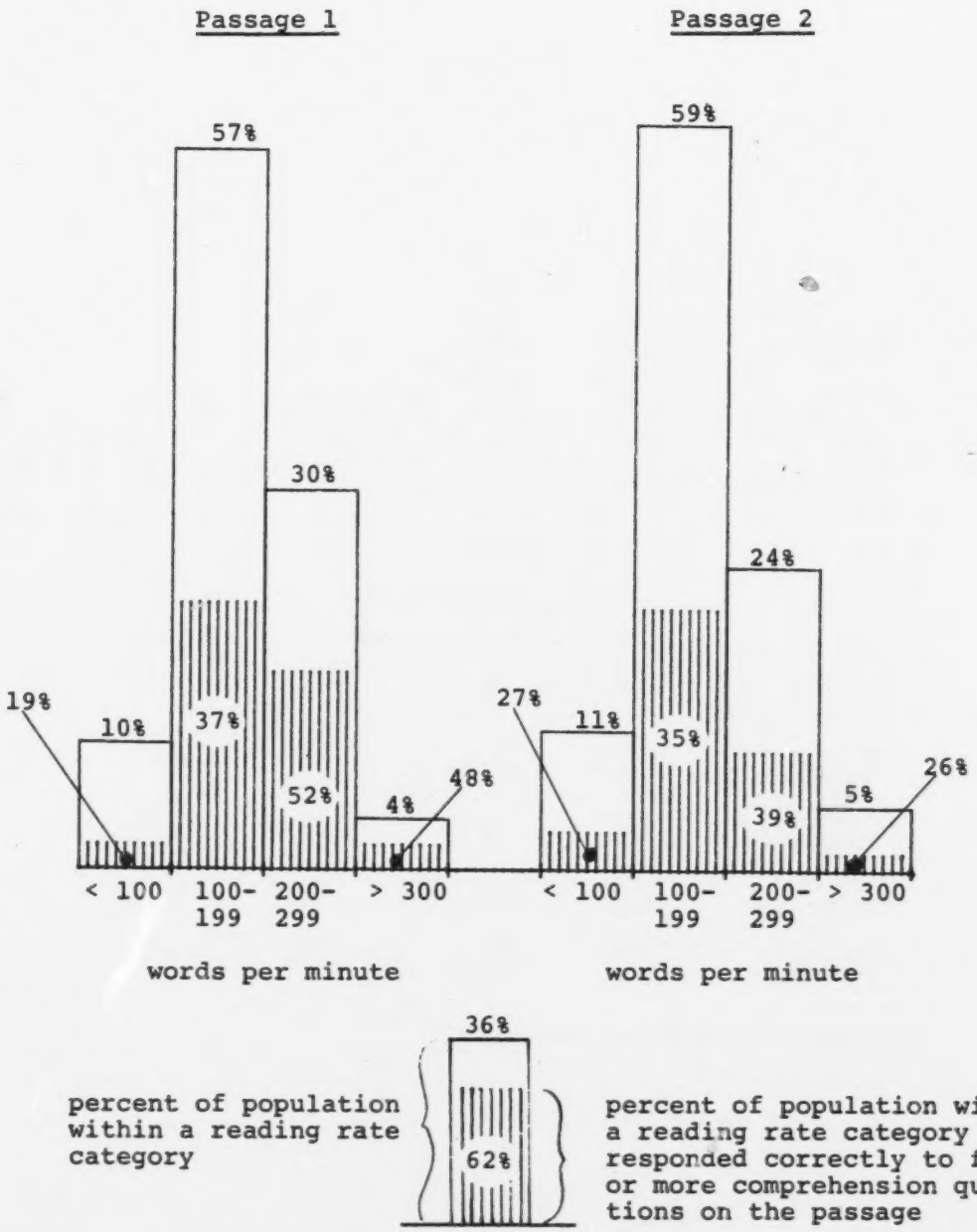
Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
National					
3 or fewer correct	72.8	64.6	60.8	74.1	65.1
4 or more correct	27.2	35.4	39.2	25.9	34.9

Figure 2-3

COMPREHENSION WITHIN RATE

National: 13-Year-Olds



Results by Region

Reading Rate

Exhibit 2-2-1

Regional Results: Reading Rate
Percentage of 13-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	9.7	56.7	29.7	3.8
Northeast	11.6	53.9	29.4	5.1
*Difference	(1.9)	(-2.8)	(-0.4)	(1.2)
Southeast	10.1	63.0	24.2	2.6
Difference	(0.4)	(6.3)	(-5.5)	(-1.3)
Central	8.8	57.0	31.1	3.1
Difference	(-0.9)	(0.3)	(1.4)	(-0.8)
West	8.4	52.6	34.2	4.8
Difference	(-1.3)	(-4.1)	(4.4)	(1.0)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	11.0	59.3	24.2	5.4
Northeast	12.5	56.3	27.5	3.8
Difference	(1.4)	(-3.0)	(3.3)	(-1.7)
Southeast	11.7	65.0	17.7	5.6
Difference	(0.6)	(5.7)	(-6.5)	(0.2)
Central	11.3	57.2	25.7	5.9
Difference	(0.2)	(-2.1)	(1.5)	(0.5)
West	8.6	59.2	25.8	6.4
Difference	(-2.4)	(-3.1)	(1.6)	(1.0)

*Difference from national percentage.

A greater percentage of 13-year-olds from the Southeast were in the 100-199 words per minute category than were students from other regions, as exhibit 2-2-1 illustrates. The Southeastern region was almost 6 percentage points above the national percentage in the 100-199 words per minute category, and that same region was about 6 percentage points below the national percentage in the 200-299 words per minute category. The largest percentage of 13-year-olds who read less than 100 words per minute on either passage was from the Northeast. At the higher reading rates, almost 40% of the Western 13-year-olds read Passage 1 at 200 or more words per minute, whereas fewer than one in three accomplished that throughout the remainder of the nation. The West exhibited the highest percentage (32%) in that rate category on the second passage as well.

By contrast, the Southeast was 7 percentage points below the national percentage of students who read in excess of 200 words per minute on Passage 1. The Northeast contained the smallest percentage of students reading at 300 words per minute or more on Passage 2, but that region contained the largest percentage of readers in the 200 to 299 words per minute category on that same passage. In all regions except the Northeast a larger percentage of 13-year-olds read Passage 2 at 300 or more words per minute than read Passage 1 at that same rate.

When the percentages of 13-year-olds who read both passages within the same rate category are examined, as exhibit C-1 in appendix C illustrates, the Southeast had the largest percentage within the 100-199 words per minute category and the smallest percentage within the 200-299 words per minute category. The percentages of the other three regions of the country were similar to each other within both of those rate categories between 100 and 299 words per minute.

Comprehension

Only one out of three 13-year-olds in the Southeast was able to answer four or more comprehension questions correctly on Passage 1, as compared to 40% for the nation and a high of 46% for Northeastern 13-year-olds. Comprehension percentages were lower for all regions on Passage 2, as the following exhibit shows. The percentage of 13-year-olds decreased from Passage 1 to Passage 2 less in the Southeast and Central regions than they did in the other two regions.

Exhibit 2-2-2

Regional Results: Comprehension
Percentage of 13-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	59.8	40.2
Northeast	54.5	45.5
*Difference	(-5.2)	(5.2)
Southeast	66.5	33.5
Difference	(6.8)	(-6.3)
Central	62.4	37.6
Difference	(2.6)	(-2.6)
West	54.9	45.1
Difference	(-4.9)	(4.9)

Passage 2

	3 or fewer correct	4 or more correct
National	65.1	34.9
Northeast	62.1	37.9
Difference	(-3.0)	(3.0)
Southeast	69.8	30.2
Difference	(4.7)	(-4.7)
Central	65.1	34.9
Difference	(0.0)	(-0.0)
West	63.3	36.7
Difference	(-1.8)	(1.8)

*Difference from national percentage.

Nearly 22% of the 13-year-olds from the Northeast correctly answered four or more comprehension questions on both passages, compared to 13% for youngsters from the Southeast, 18% from the Central region, and 19% from the Western region. The largest percentages of those 13-year-olds read both passages within the 100-199 words per minute category. In fact, 68% of the students from the Southeast who had had acceptable (i.e., four or more right) comprehension scores on both passages read within the 100-199 rate category, in contrast to less than 46% for any of the other regional groups. (Exhibit D-2 in appendix D shows other percentages which may be of interest.)

Comprehension within Rate

When one examines comprehension within rate categories, the Southeast region of the United States again stands out with the lowest percentages of 13-year-olds who answered four or more exercises correctly on either passage. They were lowest in all rate categories from 0 to 299 words per minute--as low as 11% for those who read at less than 100 words per minute on Passage 1. In the >300 words per minute category, as exhibit 2-2-3 indicates, the Southeastern group contained the largest percentage of any region answering four or more comprehension exercises correctly: 62%.

Exhibit 2-2-3

Regional Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Northeast					
3 or fewer correct	81.5	55.2	42.4	56.4	54.5
4 or more correct	18.5	44.8	57.6	43.6	45.5
Southeast					
3 or fewer correct	88.9	68.2	56.0	37.7	66.5
4 or more correct	11.1	31.8	44.0	62.3	33.5
Central					
3 or fewer correct	84.5	64.8	50.9	71.6	62.4
4 or more correct	15.5	35.2	49.1	28.4	37.6
West					
3 or fewer correct	67.0	61.1	44.2	40.9	54.9
4 or more correct	33.0	38.9	55.8	59.1	45.1

On Passage 2 the Southeast ranked lowest in all "4 or more correct" comprehension within rate categories except the category of >300 words per minute where the 13-year-olds ranked above the Northeast. (See exhibit 2-2-4.)

On both passages the Northeast exhibited the highest percentages with four or more correct responses within the 100-299 words per minute categories but had the smallest percentage of the four regions in the 300 or more words per minute category on Passage 2. The West, as can be seen in exhibits 2-2-3 and 2-2-4, contained the highest percentage of 13-year-olds in the "4 or more correct" comprehension within rate categories at less than 100 words per minute on Passage 1 and at both extreme rate categories on Passage 2.

Exhibit 2-2-4

Regional Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	≤100	100-199	200-299	≥300	Total
Northeast					
3 or fewer correct	77.0	61.2	54.2	82.8	62.1
4 or more correct	23.0	38.8	45.8	17.2	37.9
Southeast					
3 or fewer correct	81.4	67.1	70.1	76.2	69.8
4 or more correct	18.6	32.9	29.9	23.8	30.2
Central					
3 or fewer correct	71.2	65.7	59.0	74.4	65.1
4 or more correct	28.8	34.3	41.0	25.6	34.9
West					
3 or fewer correct	56.7	63.7	63.9	66.5	63.3
4 or more correct	43.3	36.3	36.1	33.5	36.7

Thirteen-year-olds from the Southeast, Central, and West who had read both passages within the 100-199 words per minute category had similar percentages (about 16%) of their groups who responded correctly to four or more of the comprehension exercises. The Northeast had a slightly larger percentage (23%). Students from the Northeast, Central and West who had read both passages within the 200-299 rate category had similar percentages

(28-29%) of their groups who scored four or more on both passages, while the Southeast had a considerably smaller percentage (11%) who did so. Of the 7% of the Southeastern 13-year-olds who had read both passages at less than 100 words per minute, less than 1% had acceptable (i.e., four or more correct) comprehension scores on both passages. Only 2% of the Central teenagers within that same rate category had acceptable comprehension scores. In contrast, of the 6% of the Western 13-year-olds who had read both passages at less than 100 words per minute, 37% of them scored four or more on the comprehension exercises on both passages. For those who read both passages in excess of 300 words per minute, the Central region had the smallest percentage (12%) with four or more correct on the comprehension questions on both passages, and the West had the largest percentage (21%). (See exhibit C-2 in appendix C.)

Results by Sex

Reading Rate

One third of the female 13-year-olds read Passage 1 at between 200 and 299 words per minute while slightly more than one fourth of the males read within that same rate category. On Passage 2 the difference between males and females is not as pronounced within that 200-299 rate category. On both passages--as exhibit 2-3-1 illustrates--the percentages of males and females

Exhibit 2-3-1

Sex Results: Reading Rate
Percentage of 13-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	≤100	100-199	200-299	≥300
National	9.7	56.7	29.7	3.8
Male	13.0	58.0	26.0	3.0
*Difference	(3.3)	(1.3)	(-3.7)	(-0.9)
Female	6.4	55.4	33.5	4.7
Difference	(-3.3)	(-1.3)	(3.7)	(0.9)

Passage 2

	Reading Rate			
	≤100	100-199	200-299	≥300
National	11.0	59.3	24.2	5.4
Male	14.1	59.4	22.6	4.0
Difference	(3.0)	(0.1)	(-1.6)	(-1.5)
Female	8.0	59.2	25.9	6.9
Difference	(-3.0)	(-0.1)	(1.6)	(1.5)

*Difference from national percentage.

reading within the 100-199 words per minute category are similar. Greater percentages of males compared to females read both passages at less than 100 words per minute; in fact the percentage of

males in the <100 words per minute category on Passage 1 is twice that for females. The overall results for the second passage do not show as great a difference between males and females as appeared in the first passage.

Comprehension

Although in general 13-year-old males did not read as fast as their female counterparts, male comprehension scores were somewhat higher--as exhibit 2-3-2 reveals. On both passages, males correctly answering four or more comprehension exercises were more than 5 percentage points above females being assessed by the same criteria.

Exhibit 2-3-2

Sex Results: Comprehension
Percentage of 13-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	59.8	40.2
Male	56.9	43.1
*Difference	(-2.8)	(2.8)
Female	62.6	37.4
Difference	(2.9)	(-2.9)

Passage 2

	3 or fewer correct	4 or more correct
National	65.1	34.9
Male	62.3	37.7
Difference	(-2.8)	(2.8)
Female	67.9	32.1
Difference	(2.8)	(-2.8)

*Difference from national percentage.

Twenty percent of the male 13-year-olds and 16% of the females responded correctly to four or more comprehension questions on both passages--as is noted in exhibit D-2 in appendix D. Of those, only 1% of the females read both passages at less than 100 words per minute, compared to 7% of the males. Also, 2% of the males who had acceptable (i.e., four or more correct) comprehension scores read 300 or more words per minute on both passages, compared to 4% of the females.

Comprehension within Rate

An examination of comprehension of four or more correct responses within the four rate categories confirms the generally higher comprehension percentages of males compared to females, as the reader can see in the following exhibit.

Exhibit 2-3-3

Sex Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	≤100	100-199	200-299	>300	Total
Male					
3 or fewer correct	78.0	60.5	38.6	54.0	56.9
4 or more correct	22.0	39.5	61.4	46.0	43.1
Female					
3 or fewer correct	87.8	65.0	55.5	51.3	62.6
4 or more correct	12.2	35.0	44.5	48.7	37.4

Passage 2

	Reading Rate				
	≤100	100-199	200-299	>300	Total
Male					
3 or fewer correct	69.9	61.7	56.7	74.6	62.3
4 or more correct	30.1	38.3	43.3	25.4	37.7
Female					
3 or fewer correct	77.9	67.4	64.4	73.8	67.9
4 or more correct	22.1	32.6	35.6	26.2	32.1

Thirteen-year-old males show larger percentages in all "4 or more correct" comprehension within rate categories on both passages except within the >300 words per minute category. Females and males had similar percentages who answered more than three comprehension exercises correctly within that highest rate

category. The largest percentages scoring four or more correct responses on the comprehension exercises were within the 200-299 words per minute category for boys on both passages; for girls, their largest percentages having four or more correct responses occurred within the 300 or more words per minute category on Passage 1 and within the 200-299 words per minute category on Passage 2.

In the 300 or more words per minute category the percentages for males and females scoring four or more right on the comprehension exercises on both passages were nearly identical; the percentages for males were larger than the percentages for females in the other three rate categories. For example, 15% of the males who had read both passages at less than 100 words per minute correctly answered four or more comprehension questions on both passages in contrast to only 4% of the females. (See exhibit C-2 in appendix C for other percentages.)

Results by Race

Reading Rate

On both passages there were no great differences in percentages between White and Black 13-year-olds who read within the 100-199 words per minute category, but there were differences in both the lower and the higher rate categories. In the 0-100 words per minute category the percentage of Blacks was three times as great as the percentage of Whites on Passage 1 and more than twice as great on Passage 2. On both passages the percentage of Blacks in the 200-299 words per minute category was half the percentage of Whites. Though the percentage of Whites who read the first passage at 300 or more words per minute was more than twice that for Blacks, on the second passage the percentages of both Blacks and Whites in that highest rate category were more similar. (See exhibit 2-4-1.)

Exhibit 2-4-1

Race Results: Reading Rate
Percentage of 13-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	9.7	56.7	29.7	3.8
White	7.6	56.1	32.1	4.2
*Difference	(-2.1)	(-0.6)	(2.3)	(0.4)
Black	22.1	59.8	16.2	1.9
Difference	(12.3)	(3.1)	(-13.5)	(-1.9)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	11.0	59.3	24.2	5.4
White	9.3	59.0	26.2	5.5
Difference	(-1.8)	(-0.3)	(2.0)	(0.1)
Black	20.6	62.5	12.4	4.5
Difference	(9.5)	(3.2)	(-11.8)	(-1.0)

*Difference from national percentage.

Exhibit C-2 in appendix C shows that the percentage of Whites who read both passages at 300 or more words per minute was twice that of Blacks. The percentage of Whites was more than twice that of Blacks in the 200-299 rate category for both passages. However, percentages were similar for those Whites and Blacks who read both passages within the 100-199 words per minute category. About 14% of the Black 13-year-olds read both passages at less than 100 words per minute while only 6% of the Whites did so.

Comprehension

Comprehension by Black 13-year-olds was generally not as good as comprehension by White 13-year-olds on either of the passages, as the percentages noted in exhibit 2-4-2 indicate. On Passage 1 the percentage of Whites correctly answering four or more comprehension exercises was more than three times the percentage of Blacks. On Passage 2 a larger percentage of Whites compared to Blacks responded correctly to more than three comprehension questions, but the difference between them was not as great as on Passage 1. The percentage of Whites in the "4 or more correct" category, in fact, was somewhat smaller on Passage 2

Exhibit 2-4-2

Race Results: Comprehension
Percentage of 13-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	59.8	40.2
White	55.2	44.8
*Difference	(-4.5)	(4.5)
Black	86.3	13.7
Difference	(26.6)	(-26.6)

Passage 2

	3 or fewer correct	4 or more correct
National	65.1	34.9
White	62.4	37.6
Difference	(-2.7)	(2.7)
Black	79.7	20.3
Difference	(14.6)	(-14.6)

*Difference from national percentage.

than on Passage 1, while the percentage of Blacks responding correctly to four or more exercises on the more difficult second passage increased considerably over Passage 1.

An interesting contrast to the above percentages is found by examining those 13-year-olds who correctly answered four or more of the comprehension questions on both passages. As can be seen in exhibit D-2 in appendix D, 20% of the White students correctly answered four or more comprehension questions on both passages, while only 6% of the Black students did so.

Comprehension within Rate

The following exhibit reveals that the percentages of Whites who answered more than three comprehension questions correctly were greater than the percentages of Blacks in all rate categories on Passage 1. A similar pattern emerged for Passage 2, although the differences in percentages were not as great as they were on Passage 1. The total percentage of Black 13-year-olds responding correctly to four or more exercises on Passage 1 was only about 14%, as was noted in the exhibit above; but within the 200-299 words per minute rate category, 34% of the Black students correctly answered four or more comprehension questions on that passage. In contrast, however, less than 1% of the Black 13-year-olds who read in excess of 300 words per minute answered more than three comprehension exercises correctly on Passage 1. Black 13-year-olds who read at 300 or more words per minute on Passage 2 did somewhat better on the comprehension exercises: 11% of them were able to answer four or more comprehension questions correctly.

In addition, Black 13-year-olds obtained larger percentages of four or more correct on comprehension measures within each rate category (except in the 200-299 words per minute category) on Passage 2 compared to Passage 1. It is of note that within the 100-199 words per minute category the percentages of Whites scoring four or more correct responses decreased slightly from 42% on Passage 1 to 38% on Passage 2, while the percentage of Blacks doubled from 12% on the first passage to 24% on the second passage.

Of the 14% of the Black 13-year-olds who read both passages at less than 100 words per minute, fewer than 2% of them answered four or more comprehension questions correctly on both passages. Nearly 17% of the Whites in that rate category answered four or more correctly on both passages. Those large differences in percentages having acceptable comprehension scores on both passages was evident throughout all rate categories for 13-year-olds, although the difference was not as great within the 200-299 words per minute category, as exhibit C-2 in appendix C indicates.

Exhibit 2-4-3

Race Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
White					
3 or fewer correct	74.4	58.2	46.5	47.9	55.2
4 or more correct	25.6	41.8	53.5	52.1	44.8
Black					
3 or fewer correct	94.2	88.4	66.5	100.0	86.3
4 or more correct	5.8	11.6	33.5	0.0	13.7

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
White					
3 or fewer correct	65.7	62.5	59.3	71.0	62.4
4 or more correct	34.3	37.5	40.7	29.0	37.6
Black					
3 or fewer correct	88.6	76.0	80.0	89.3	79.7
4 or more correct	11.4	24.0	20.0	10.7	20.3

Results by Parental Education

Reading Rate

Exhibit 2-5-1

Parental Education Results: Reading Rate
Percentage of 13-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	9.7	56.7	29.7	3.8
No High School	18.6	62.2	17.9	1.3
*Difference	(8.9)	(5.5)	(-11.8)	(-2.6)
Some High School	9.6	72.7	16.5	1.2
Difference	(-0.1)	(15.9)	(-13.3)	(-2.6)
Graduated High School	8.5	59.4	28.6	3.5
Difference	(-1.2)	(2.7)	(-1.1)	(-0.4)
Post High School	4.5	48.6	41.2	5.8
Difference	(-5.3)	(-8.1)	(11.4)	(2.0)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	11.0	59.3	24.2	5.4
No High School	18.8	64.7	11.2	5.2
Difference	(7.8)	(5.4)	(-13.0)	(-0.2)
Some High School	9.3	71.7	17.2	1.8
Difference	(-1.7)	(12.4)	(-7.0)	(-3.6)
Graduated High School	9.9	60.8	24.1	5.2
Difference	(-1.2)	(1.6)	(-0.2)	(-0.2)
Post High School	6.4	54.5	31.7	7.4
Difference	(-4.7)	(-4.8)	(7.5)	(2.0)

*Difference from national percentage.

With one exception, the percentage of 13-year-olds who read 200 or more words per minute increased on both passages as the educational background of their parents increased. (The exception is for the "some high school" group on Passage 1 which was less than 2 percentage points different from the "no high school" group.) Almost half (47%) of the students whose parents had more than a high school education read Passage 1 faster than 200 words per minute; that percentage is far above the percentage for any other parental education group and more than double the percentage for readers whose parents had either only some or no high school education.

Exhibit 2-5-1 also indicates that almost one fifth of the 13-year-olds whose parents have had no high school education read both passages at rates less than 100 words per minute. This is 9 percentage points above the national percentage for Passage 1 and 8 percentage points above for Passage 2. In addition, on Passage 1, the percentage of 13-year-olds reading at less than 100 words per minute whose parents had no high school education was four times greater than those whose parents had post high school education. Conversely, at speeds in excess of 300 words per minute, students whose parents had higher education exhibited four times the percentage of those whose parents had no high school education. The wide difference in percentages between those two groups is not evident in the highest rate category on Passage 2, though it is evident for those reading less than 100 words per minute.

Only 3% of the "post high school" group read both passages at less than 100 words per minute, in comparison to 5% for the two middle groups, and 12% for the "no high school" group. The 13-year-olds whose parents had some high school showed the largest percentage (61%) reading both passages at a rate between 100 and 199 words per minute. The "post high school" group again had the smallest percentage within that 100-199 rate category. However, the "post high school" group had the largest percentages of any of the four parental education groups who read both passages within either of the two highest rate categories. Less than 1% of the "some high school" group read both passages at 300 or more words per minute, in contrast to more than 4% of the "post high school" group. (See exhibit C-2 in appendix C.)

Comprehension

The results of the comprehension exercises on Passage 1 indicate that as the level of parental education increased the percentage of 13-year-olds responding correctly to four or more exercises increased.

Exhibit 2-5-2

Parental Education Results: Comprehension
Percentage of 13-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	59.8	40.2
No High School	74.4	25.6
*Difference	(14.6)	(-14.6)
Some High School	71.0	29.0
Difference	(11.3)	(-11.3)
Graduated High School	61.6	38.4
Difference	(1.9)	(-1.9)
Post High School	46.9	53.1
Difference	(-12.9)	(12.9)

Passage 2

	3 or fewer correct	4 or more correct
National	65.1	34.9
No High School	71.1	28.9
Difference	(6.0)	(-6.0)
Some High School	74.5	25.5
Difference	(9.4)	(-9.4)
Graduated High School	63.6	36.4
Difference	(-1.5)	(1.5)
Post High School	59.6	40.4
Difference	(-5.5)	(5.5)

*Difference from national percentage.

As exhibit 2-5-2 shows, the percentages of students scoring four or more correct on the comprehension exercises decreased (the range also decreased) from Passage 1 to Passage 2 in all parental education categories except "no high school." The percentage of that group rose from 26% on the first passage to 29% on the second passage, while the percentage of 13-year-olds whose parents had more than a high school education decreased from 53%

to 40%. Except for the "no high school group," comprehension percentages increased on Passage 2 as the educational background of the parents increased.

Thirteen-year-olds whose parents had some high school education showed the smallest percentage (8%) of any of the parental education groups having four or more correct responses on the comprehension exercises on both passages. In contrast, teenagers in the "post high school" group had the highest percentages (26%) of any of the subgroups in the study of 13-year-olds who correctly answered four or more comprehension questions on both passages. As exhibit D-2 in appendix D illustrates, an extremely high 81% of the 13-year-olds who had four or more right on both passages read within the 100-199 words per minute category on both passages. Less than 1% of that group read both passages within either of the two extreme rate categories. Nearly 14% of the "no high school" group who correctly answered four or more on both passages read both passages at less than 100 words per minute; the next largest percentage within that lowest rate category was only 3%. (Other percentages are included in appendix D.)

Comprehension within Rate

The increase in percentages of four or more correct comprehension responses as parental education increased can also be observed in the exhibits on comprehension within rate recorded below. As exhibit 2-5-3 indicates, percentages of 13-year-olds scoring four or more correct on the comprehension exercises on Passage 1 increased in all but one instance as the education of their parents increased in all rate categories except the highest. The opposite occurred for 13-year-olds reading in excess of 300 words per minute; there the percentages of students who scored high on the comprehension questions decreased as parental education increased. Exhibit 2-5-3 shows that only 39% of the students in the "post high school" group who read at greater than 300 words per minute answered four or more questions correctly on Passage 1. One hundred percent of the relatively few students in the "no high school" group answered four or more questions correctly.

That phenomenon is similar to the results for Passage 2, where, except for 13-year-olds whose parents had no high school education, percentages of students scoring four or more correct on the comprehension questions increased as their parents' education increased for all rate categories up to 300 words per minute. For those in the 300 or more words per minute category, percentages with four or more correct responses decreased as parental education increased, except for those in the "no high school" group.

Exhibit 2-5-3

Parental Education Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	≤100	100-199	200-299	>300	Total
No High School					
3 or fewer correct	84.8	72.7	74.8	0.0	74.4
4 or more correct	15.2	27.3	25.2	100.0	25.6
Some High School					
3 or fewer correct	89.5	70.5	64.7	45.7	71.0
4 or more correct	10.5	29.5	35.3	54.3	29.0
Graduated High School					
3 or fewer correct	83.9	61.8	55.9	50.9	61.6
4 or more correct	16.1	38.2	44.1	49.1	38.4
Post High School					
3 or fewer correct	59.7	52.8	36.6	60.8	46.9
4 or more correct	40.3	47.2	63.4	39.2	53.1

For the "no high school" group on the second passage, the percentages scoring four or more correct are higher than the percentages for students whose parents had some high school education and who read between 0 and 299 words per minute. Less than 1% of the 13-year-olds who read faster than 300 words per minute and whose parents had no high school education answered four or more comprehension questions correctly.

Of the 23% of the 1 ır-olds whose parents had a post high school education and who ıad read both passages within the 200-299 words per minute category, one third of them answered four or more comprehension questions correctly on both passages. That was the second largest percentage having acceptable comprehension scores on both passages within any of the rate categories for any of the parental education groups. The largest percentage having acceptable comprehension scores on both passages was made by the

"graduated high school" group who had read both passages at 300 or more words per minute; that 39% was far above the percentages for any of the other groups within that rate category, as an examination of exhibit C-2 in appendix C shows.

Exhibit 2-5-4

Parental Education Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
No High School					
3 or fewer correct	80.1	66.9	66.9	100.0	71.1
4 or more correct	19.9	33.1	33.1	0.0	28.9
Some High School					
3 or fewer correct	92.6	71.1	80.7	56.1	74.5
4 or more correct	7.4	28.9	19.3	43.9	25.5
Graduated High School					
3 or fewer correct	70.9	62.8	62.9	62.6	63.6
4 or more correct	29.1	37.2	37.1	37.4	36.4
Post High School					
3 or fewer correct	61.0	60.5	53.5	78.0	59.6
4 or more correct	39.0	39.5	46.5	22.0	40.4

Results by Size-and-Type of Community

Reading Rate

More than three fourths of "rural" and "inner city" 13-year-olds read Passage 1 at less than 200 words per minute; nearly 83% of them did so on Passage 2, in contrast to 60% of the youngsters from the "affluent suburb" group on Passage 1 and 65% on Passage 2. Two thirds of all "rural" students were in the 100-1-9 words per minute category for Passage 1 and nearly three fourths were in that category for Passage 2. As exhibits 2-6-1 and 2-6-2 show,

Exhibit 2-6-1

Size-and-Type of Community Results: Reading Rate
Percentage of 13-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	9.7	56.7	29.7	3.8
Extreme Rural	10.2	66.9	20.9	2.1
*Difference	(0.5)	(10.1)	(-8.9)	(-1.7)
Extreme Inner City	17.4	60.5	19.2	2.9
Difference	(7.7)	(3.8)	(-10.5)	(-1.0)
Extreme Affluent Suburb	8.5	51.1	33.9	6.5
Difference	(-1.2)	(-5.6)	(4.1)	(2.7)
Rest of Big City	12.6	55.7	25.9	5.7
Difference	(2.9)	(-1.0)	(-3.8)	(1.9)
Suburban Fringe	11.2	50.9	33.8	4.1
Difference	(1.5)	(-5.8)	(4.1)	(0.3)
Medium City	5.9	59.8	30.1	4.2
Difference	(-3.8)	(3.0)	(0.4)	(0.4)
Small City	8.8	57.2	31.3	2.6
Difference	(-0.9)	(0.5)	(1.5)	(-1.2)

*Difference from national percentage.

at rates of 200 words per minute or faster, percentages for 13-year-olds in the "affluent suburb" category were nearly twice the percentages for those in either the "rural" or "inner city" categories on both passages.

Although the percentages of 13-year-olds in most STOC groups who read at 200 words per minute or faster declined from Passage 1 to Passage 2, the percentages increased for students in the "rest of big city" group and remained almost identical for students in the "medium city" group.

Exhibit 2-6-2

Size-and-Type of Community Results: Reading Rate
Percentage of 13-Year-Olds in Each Rate Category

Passage 2

	Reading Rate			
	≤100	100-199	200-299	≥300
National	11.0	59.3	24.2	5.4
Extreme Rural	10.3	73.1	12.9	3.7
*Difference	(-0.8)	(13.8)	(-11.3)	(-1.7)
Extreme Inner City	24.1	58.8	11.9	5.2
Difference	(13.0)	(-0.5)	(-12.3)	(-0.2)
Extreme Affluent Suburb	8.8	55.8	27.9	7.6
Difference	(-2.3)	(-3.5)	(3.6)	(2.1)
Rest of Big City	12.0	55.0	23.8	9.2
Difference	(1.0)	(-4.3)	(-0.4)	(3.7)
Suburban Fringe	11.5	55.1	29.8	3.6
Difference	(0.5)	(-4.2)	(5.5)	(-1.8)
Medium City	7.1	58.6	27.9	6.5
Difference	(-4.0)	(-0.7)	(3.6)	(1.1)
Small City	10.9	60.6	23.7	4.8
Difference	(-0.2)	(1.3)	(-0.5)	(-0.6)

*Difference from national percentage.

The largest percentages of 13-year-olds reading in excess of 300 words per minute occurred in the "extreme affluent suburb" and the "rest of big city" categories, with the percentage in the "affluent suburb" group slightly larger on Passage 1 and the "rest of big city" group larger on Passage 2. More than 50% of the 13-year-olds from all size-and-type of community categories read between 100 and 199 words per minute on both passages.

About 14% of the "inner city" 13-year-olds read both passages at less than 100 words per minute, the largest percentage of any

of the STOC groups within that rate category. In contrast, only 3% of "medium city" 13-year-olds read both passages at less than 100 words per minute. "Rural" 13-year-olds had the largest percentage (61%) reading both passages within the 100-199 words per minute category, while all of the other STOC groups had similar percentages (between 40% and 47%). The range of percentages within the 200-299 rate category were from 7% for "inner city" to 21% for "rest of big city." Less than 2% of the 13-year-olds from "rural" and "small city" backgrounds read both passages at 300 words per minute or faster, while as many as 5% of the "affluent suburb" and 6% of the "rest of big city" 13-year-olds read both passages within that highest rate category. (See exhibit C-2 in appendix C.)

Comprehension

The highest percentage of 13-year-olds from any size-and-type of community who responded correctly to more than three comprehension questions on Passage 1 was approximately 45%--from the "suburban fringe" group. On Passage 2 the "extreme affluent suburb" group showed the largest percentage: 41%. The exhibit on the following page reveals that on both passages approximately 27% of the students from the "extreme inner city" group answered four or more comprehension questions correctly, the lowest percentage for any of the STOC groups on either passage. The results for Passage 2 also show relatively low percentages for students in the "extreme rural" and "small city" groups.

The percentages of 13-year-olds with four or more correct responses to the comprehension exercises dropped from Passage 1 to Passage 2 for five of the groups, while "inner city" remained approximately the same, and "rest of big city" increased from 35% to 38%. The largest decrease--from 39% to 29%--occurred in the percentage of "extreme rural" 13-year-olds who responded correctly to more than three comprehension questions.

The "inner city" youngsters had the smallest percentage of any STOC group scoring four or more on the comprehension exercises on both passages: only 11%. In contrast--as exhibit D-2 in appendix D indicates--21% of the 13-year-olds from the "affluent suburb" group and 22% from the "suburban fringe" group scored four or more right on both passages. Other STOC groups were distributed between those two extremes. It is interesting to note, in comparing one group with another, that of the 11% from the "inner city" group who answered four or more comprehension questions correctly almost 9% of them read both passages at more than 300 words per minute--the next largest percentage reading both passages at 300 or more words per minute was 4%; only 3% of the "affluent suburb" group who had answered four or more correctly read both passages at 300 words per minute or better.

Exhibit 2-6-3

Size-and-Type of Community Results: Comprehension
Percentage of 13-Year-Olds in Each Comprehension Category

	Passage 1	
	3 or fewer correct	4 or more correct
National	59.8	40.2
Extreme Rural	61.0	39.0
*Difference	(1.2)	(-1.2)
Extreme Inner City	73.2	26.8
Difference	(13.5)	(-13.5)
Extreme Affluent Suburb	56.3	43.7
Difference	(-3.5)	(3.5)
Rest of Big City	65.4	34.6
Difference	(5.7)	(-5.7)
Suburban Fringe	55.5	44.5
Difference	(-4.2)	(4.2)
Medium City	59.1	40.9
Difference	(-0.7)	(0.7)
Small City	59.5	40.5
Difference	(-0.2)	(0.2)

	Passage 2	
	3 or fewer correct	4 or more correct
National	65.1	34.9
Extreme Rural	71.4	28.6
Difference	(6.3)	(-6.3)
Extreme Inner City	72.8	27.2
Difference	(7.7)	(-7.7)
Extreme Affluent Suburb	58.9	41.1
Difference	(-6.2)	(6.2)
Rest of Big City	61.8	38.2
Difference	(-3.3)	(3.3)
Suburban Fringe	61.9	38.1
Difference	(-3.2)	(3.2)
Medium City	63.5	36.5
Difference	(-1.6)	(1.6)
Small City	67.7	32.3
Difference	(2.6)	(-2.6)

*Difference from national percentage.

Comprehension within Rate

In four out of the seven STOC categories--as can be seen in exhibit 2-6-4 which follows--percentages of 13-year-olds who responded correctly to four or more of the comprehension exercises on Passage 1 increased as their reading rates increased. Those size-and-types of communities were "extreme inner city," "suburban fringe," "medium city," and "small city." The "rest of bit city" and "extreme affluent suburb" groups showed increases in percentages across rate categories up to 299 words per minute; in the >300 words per minute rate category both of those STOC groups showed a decrease in percentages of students scoring four or more correct. That kind of pattern was not in evidence to such an extent on Passage 2, as exhibit 2-6-5 illustrates. On Passage 2 three STOC categories showed an increase in the percentages of 13-year-olds who scored four or more correct in the first three rate categories--from 0 to 299 words per minute--after which the percentages decreased. Those three groups were "extreme rural," "extreme affluent suburb," and "medium city."

An unexpected result occurred on both passages within the "extreme inner city" group. As was reported in exhibit 2-6-3, only 27% of the "inner city" 13-year-olds responded correctly to four or more comprehension questions on both passages. Yet, when the comprehension of those "inner city" 13-year-olds is examined within rate categories, as exhibits 2-6-4 and 2-6-5 report, 62% of those "inner city" students who read at 300 or more words per minute had four or more comprehension questions correct on the first passage and 61% on the second passage. On Passage 1 that percentage was the third largest percentage of "4 or more correct" in the comprehension within rate categories, for any STOC group. And on Passage 2 that was the highest percentage of students who responded to four or more correctly within any rate category. In contrast to 13-year-olds from the "affluent suburb" group who exhibited the highest overall percentage of respondents with four or more correct responses on either passage, only 25% of the students from the "affluent suburb" group who read in excess of 300 words per minute on Passage 1 and 17% on Passage 2 responded correctly to four or more comprehension exercises on either passage.

Of the 5% of the "affluent suburb" 13-year-olds who read both passages at less than 100 words per minute, 40% of them had acceptable (i.e., four or more) comprehension scores on both passages; the next largest percentage was only 16% ("medium city"), and "rural" youngsters, the lowest, had only 3%. Comprehension percentages within the 100-199 rate category on both passages were fairly comparable, although only 10% of the "inner city" group had four or more right answers to the comprehension exercises on both passages. The "affluent suburb" 13-year-olds again

Exhibit 2-6-4

Size-and-Type of Community Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Extreme Rural					
3 or fewer correct	84.0	55.7	66.9	58.3	61.0
4 or more correct	16.0	44.3	33.1	41.7	39.0
Extreme Inner City					
3 or fewer correct	83.6	77.3	56.4	37.9	73.2
4 or more correct	16.4	22.7	43.6	62.1	26.8
Extreme Affluent Suburb					
3 or fewer correct	62.7	57.9	48.7	74.6	56.3
4 or more correct	37.3	42.1	51.3	25.4	43.7
Rest of Big City					
3 or fewer correct	92.8	62.3	51.1	100.0	65.4
4 or more correct	7.2	37.7	48.9	0.0	34.6
Suburban Fringe					
3 or fewer correct	85.3	62.0	38.2	36.7	55.5
4 or more correct	14.7	38.0	61.8	63.3	44.5
Medium City					
3 or fewer correct	82.3	64.7	47.4	29.7	59.1
4 or more correct	17.7	35.3	52.6	70.3	40.9
Small City					
3 or fewer correct	80.1	62.8	49.2	43.3	59.5
4 or more correct	19.9	37.2	50.8	56.7	40.5

led the STOC groups with the largest percentages having four or more right answers on both passages within the 200-299 and the >300 categories on both passages. (For other percentages, please refer to exhibit C-2 in appendix C.)

Exhibit 2-6-5

Size-and-Type of Community Results: Comprehension Within Rate
Percentage of 13-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Extreme Rural					
3 or fewer correct	77.0	72.0	64.7	67.6	71.4
4 or more correct	23.0	28.0	35.3	32.4	28.6
Extreme Inner City					
3 or fewer correct	80.9	71.2	79.9	38.9	72.8
4 or more correct	19.1	28.8	20.1	61.1	27.2
Extreme Affluent Suburb					
3 or fewer correct	62.4	58.9	51.4	82.6	58.9
4 or more correct	37.6	41.1	48.6	17.4	41.1
Rest of Big City					
3 or fewer correct	83.6	55.3	56.1	86.7	61.8
4 or more correct	16.4	44.7	43.9	13.3	38.2
Suburban Fringe					
3 or fewer correct	55.0	64.2	58.1	81.3	61.9
4 or more correct	45.0	35.8	41.9	18.7	38.1
Medium City					
3 or fewer correct	73.6	62.7	60.4	73.7	63.5
4 or more correct	26.4	37.3	39.6	26.3	36.5
Small City					
3 or fewer correct	80.2	65.6	66.5	70.8	67.7
4 or more correct	19.8	34.4	33.5	29.2	32.3

CHAPTER 3

17-YEAR-OLDS AND YOUNG ADULTS

National Results

Reading Rate.

The median reading rate for 17-year-olds was 195 words per minute on the first passage. The reading rates for 17-year-olds ranged from 0 to 1039 words per minute, with 17-year-olds at the lower quartile (25th percentile) reading 160 words per minute and those at the upper quartile (75th percentile) reading 247 words per minute.

Young adults (ages 26-35) showed a median reading rate of 188 words per minute, slightly lower than for 17-year-olds reading the same material. Young adult reading rates ranged from 0 to 536 words per minute, with the 25th percentile at 145 words per minute and the 75th percentile at 231 words per minute.

As figures 3-1 and 4-1 show, less than 4% of the 17-year-olds and about 7% of the young adults read Passage 1 at less than 100 words per minute. Approximately 51% of both age groups read that passage at a rate between 100 and 199 words per minute. Less than 1% of the 17-year-olds or the adults read in excess of 450 words per minute. Nearly 7% of the adults and 8% of the 17-year-olds read the first passage at a rate in excess of 300 words per minute, while 35% of the adults and 38% of the 17-year-olds read between 200 and 299 words per minute.

Slightly more than three fourths of the 17-year-olds read Passage 1 at a rate between 100 and 250 words per minute. The largest percentage within a 100 words per minute interval was 60%--between 125 and 225 words per minute--although the percentage of readers between 150 and 250 words per minute was nearly the same. The largest percentage within a 25 words per minute interval--between 175 and 200 words per minute--was 18%. One third of the 17-year-olds read between 150 and 200 words per minute, the largest percentage within any 50 words per minute interval.

17-Year-Olds

and Young Adults

Passage 1

READABILITY INDICES

17-Year-Olds and Young Adults — Passage 1 — "How to Bug a Mosquito"

formula	approximate grade placement
Fog	mid 10th
SMOG	low 10th
Dale-Chall	upper 10th

17-Year-Olds

and Young Adults

Passage 2

READABILITY INDICES

17-Year-Olds and Young Adults — Passage 2 — "The Social Order"

formula	approximate grade placement
Fog	beyond college
SMOG	beginning college
Dale-Chall	upper college

2

DISTRIBUTION OF READING RATES

17-YEAR-OLDS PASSAGE 1

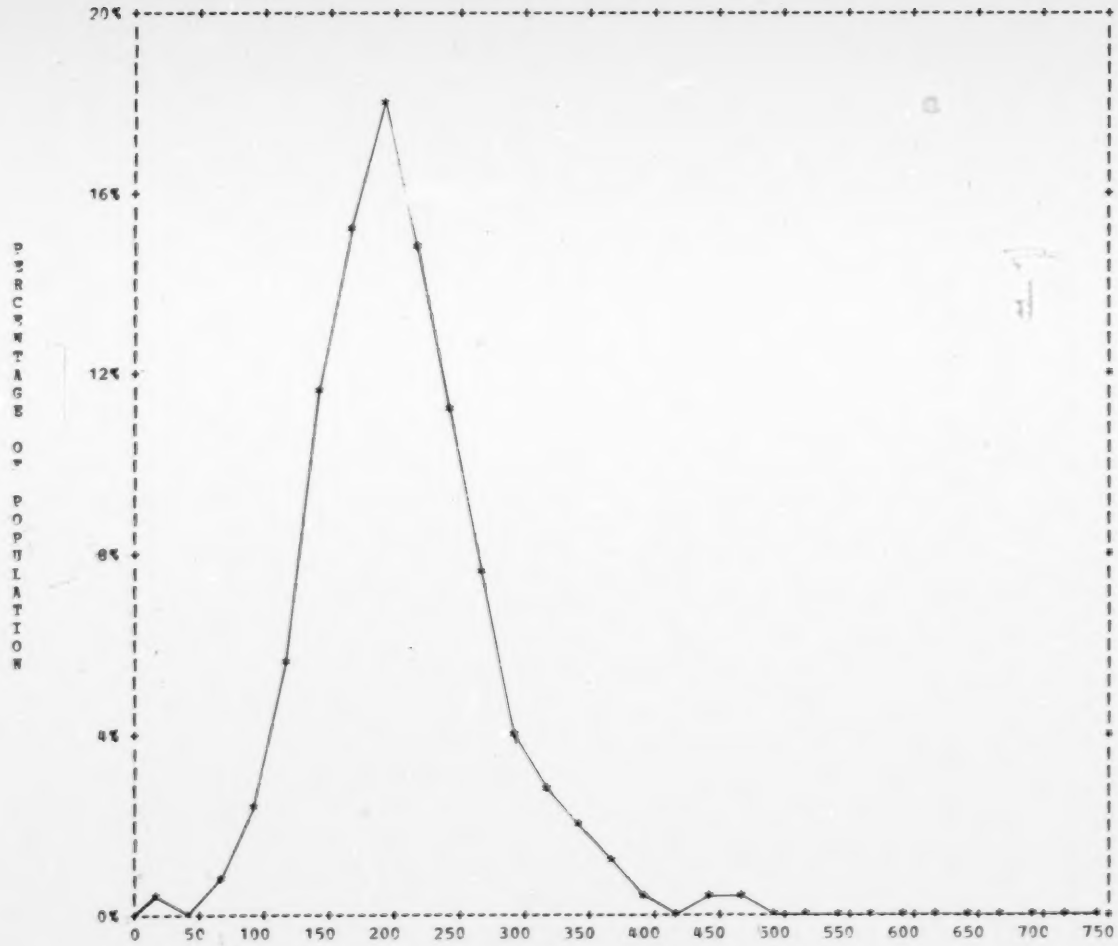


FIGURE 3-1

WORDS PER MINUTE	% IN EACH INTERVAL
0 to 25	0.4%
25 to 50	0.0%
50 to 75	0.7%
75 to 100	2.3%
100 to 125	5.8%
125 to 150	11.5%
150 to 175	15.3%
175 to 200	18.0%
200 to 225	14.9%
225 to 250	11.2%
250 to 275	7.7%
275 to 300	4.1%
300 to 325	2.9%
325 to 350	2.1%
350 to 375	1.2%
375 to 400	0.5%
400 to 425	0.1%
425 to 450	0.4%
450 to 475	0.3%
475 to 500	0.1%
500 to 525	0.1%
525 to 550	0.1%
550 to 575	0.0%
575 to 600	0.0%
600 to 625	0.0%
625 to 650	0.0%
650 to 675	0.0%
675 to 700	0.1%
700 to 725	0.0%
over 725	0.1%

DISTRIBUTION OF READING RATES

YOUNG ADULTS PASSAGE 1

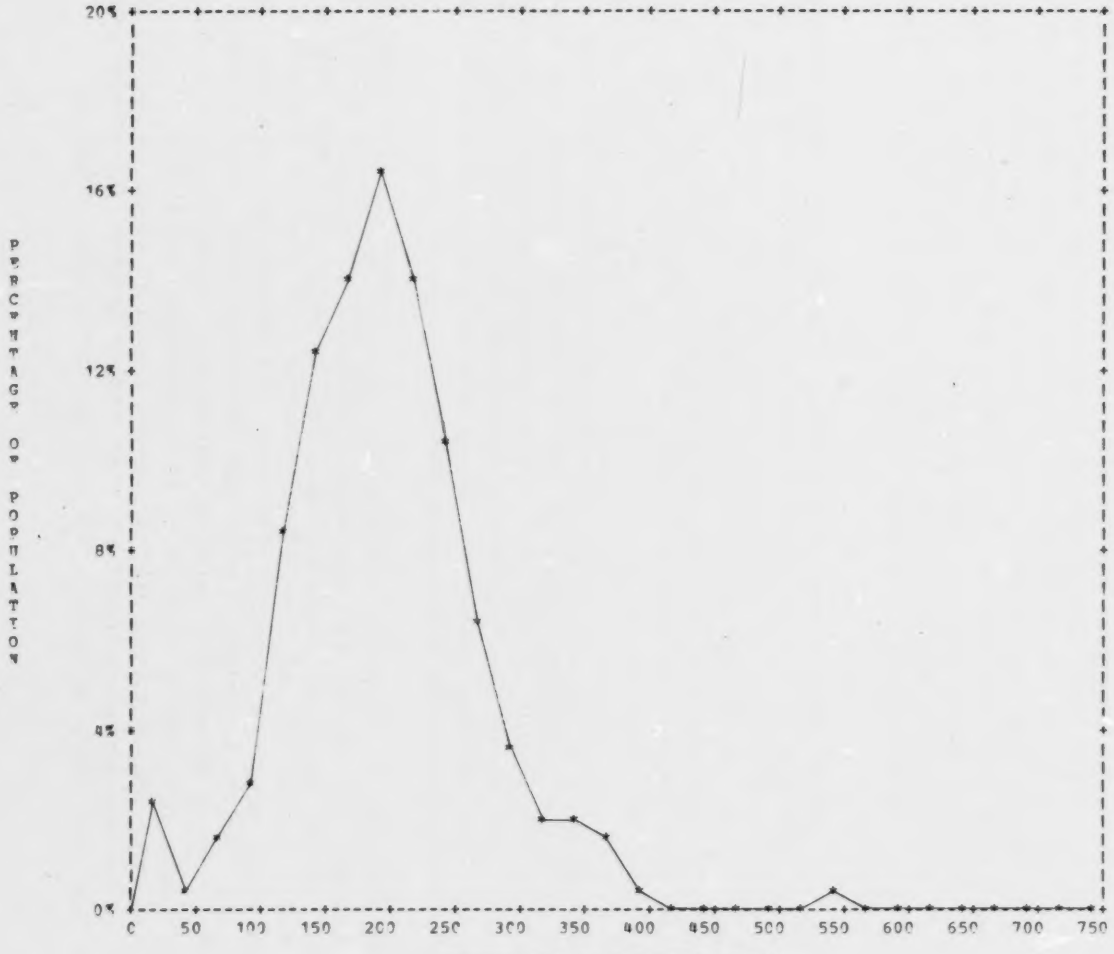


FIGURE 4-1

WORDS PER MINUTE	% IN EACH INTERVAL
0 to 25	2.2%
25 to 50	0.2%
50 to 75	1.5%
75 to 100	3.0%
100 to 125	8.5%
125 to 150	12.3%
150 to 175	14.0%
175 to 200	16.4%
200 to 225	14.2%
225 to 250	10.6%
250 to 275	6.6%
275 to 300	3.7%
300 to 325	1.8%
325 to 350	2.2%
350 to 375	1.6%
375 to 400	0.6%
400 to 425	0.1%
425 to 450	0.0%
450 to 475	0.2%
475 to 500	0.0%
500 to 525	0.1%
525 to 550	0.3%
550 to 575	0.0%
575 to 600	0.0%
600 to 625	0.0%
625 to 650	0.0%
650 to 675	0.0%
675 to 700	0.0%
700 to 725	0.0%
over 725	0.0%

Figures for young adults are nearly identical to those for 17-year-olds. About three fourths of the adults read Passage 1 at a rate between 100 and 250 words per minute. The largest percentage within a 100 words per minute interval was 60%--between 125 and 225 words per minute. The largest percentage within a 25 words per minute interval was 16%, slightly lower than for 17-year-olds, but within the same interval (175-200 words per minute) that was largest for 17-year-olds. The largest proportion within a 50 words per minute interval was 31%, between 175 and 225 words per minute.

The results for 17-year-olds and young adults on Passage 2 are similar to the results on Passage 1. The range for 17-year-olds was from 0 to 1771 words per minute and for adults from 0 to 859 words per minute. The 25th percentile was 157 words per minute for 17-year-olds and 145 words per minute for young adults; the 75th percentile was 246 words per minute for 17-year-olds and 236 words per minute for adults. The median reading rate for 17-year-olds was 195--almost identical to what it was for the first passage; for young adults the median was slightly lower: 186 words per minute.

Nearly 73% of the 17-year-olds and 74% of the adults read the second passage at a rate between 100 and 250 words per minute. The largest percentage of readers within any 100 words per minute interval, as can be seen in figures 3-2 and 4-2, was 56% for 17-year-olds and nearly 58% for young adults. Both of those percentages occurred between 125 and 225 words per minute, although a comparable percentage of 17-year-olds also read between 150 and 250 words per minute. The largest percentage within a 50 words per minute interval, 33% for 17-year-olds and 31% for adults was found between 150 and 200 words per minute for both groups. As figures 3-2 and 4-2 show, between 175 and 200 words per minute occurred the largest percentage for each group within a 25 words per minute interval; that was 17% for 17-year-olds and slightly more than 16% for young adults.

On Passage 2 slightly more than 4% of the 17-year-olds read at less than 100 words per minute, compared to nearly 7% of the adults. About half of each group read between 100 and 199 words per minute, with 35% of the 17-year-olds and 30% of the adults reading that passage between 200 and 299 words per minute. Both age groups had relatively large percentages that read within the 300 or more words per minute category: about 11% for both 17-year-olds and young adults. As exhibits 3-1-1 and 3-1-2 indicate, the percentages within each reading rate category did not vary to any great extent at the rates below 200 words per minute but did vary slightly at rates above that figure.

DISTRIBUTION OF READING RATES

17-YEAR-OLDS PASSAGE 2

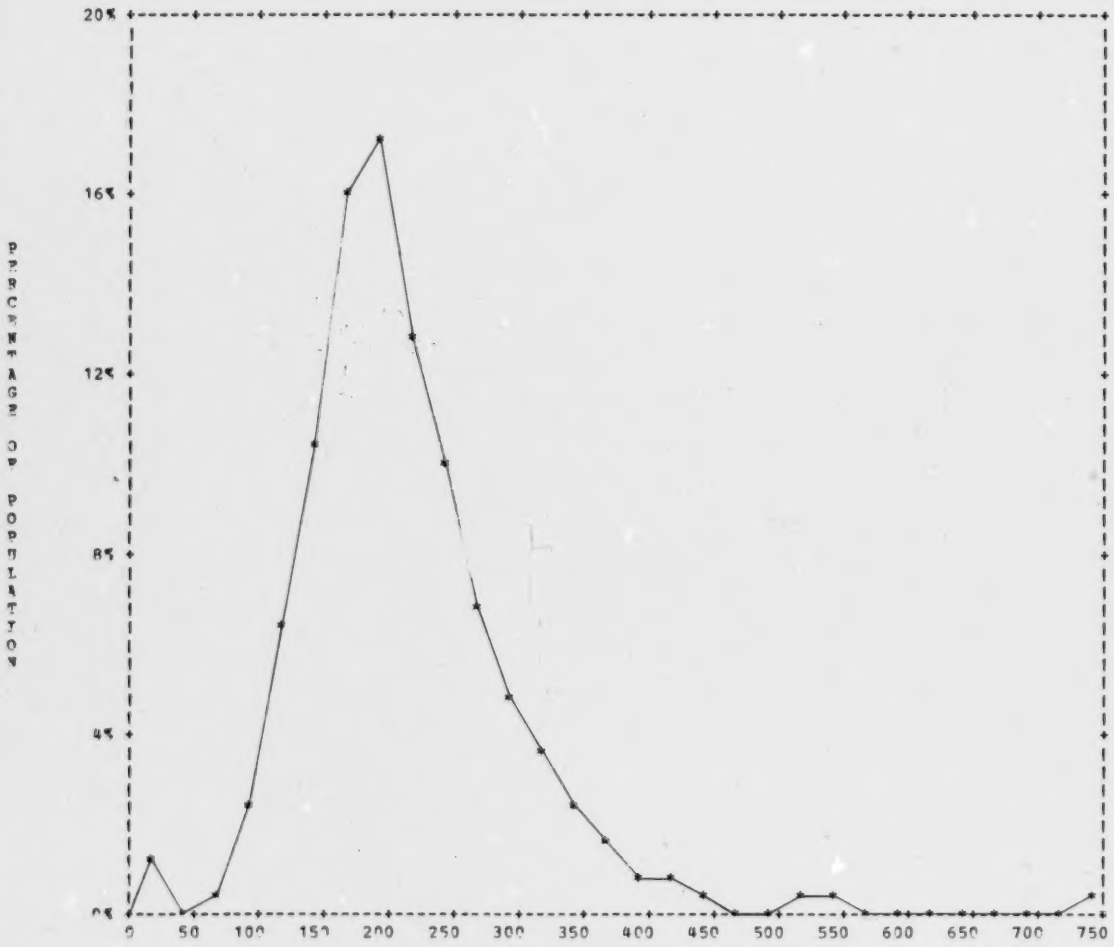


FIGURE 3-2

WORDS PER MINUTE	% IN EACH INTERVAL
0 to 25	1.1%
25 to 50	0.1%
50 to 75	0.6%
75 to 100	2.4%
100 to 125	6.4%
125 to 150	10.3%
150 to 175	16.1%
175 to 200	17.1%
200 to 225	12.6%
225 to 250	10.2%
250 to 275	6.8%
275 to 300	4.9%
300 to 325	3.6%
325 to 350	2.6%
350 to 375	1.5%
375 to 400	0.9%
400 to 425	0.7%
425 to 450	0.5%
450 to 475	0.1%
475 to 500	0.2%
500 to 525	0.3%
525 to 550	0.2%
550 to 575	0.0%
575 to 600	0.2%
600 to 625	0.1%
625 to 650	0.1%
650 to 675	0.1%
675 to 700	0.0%
700 to 725	0.1%
over 725	0.4%

DISTRIBUTION OF READING RATES

YOUNG ADULTS PASSAGE 2

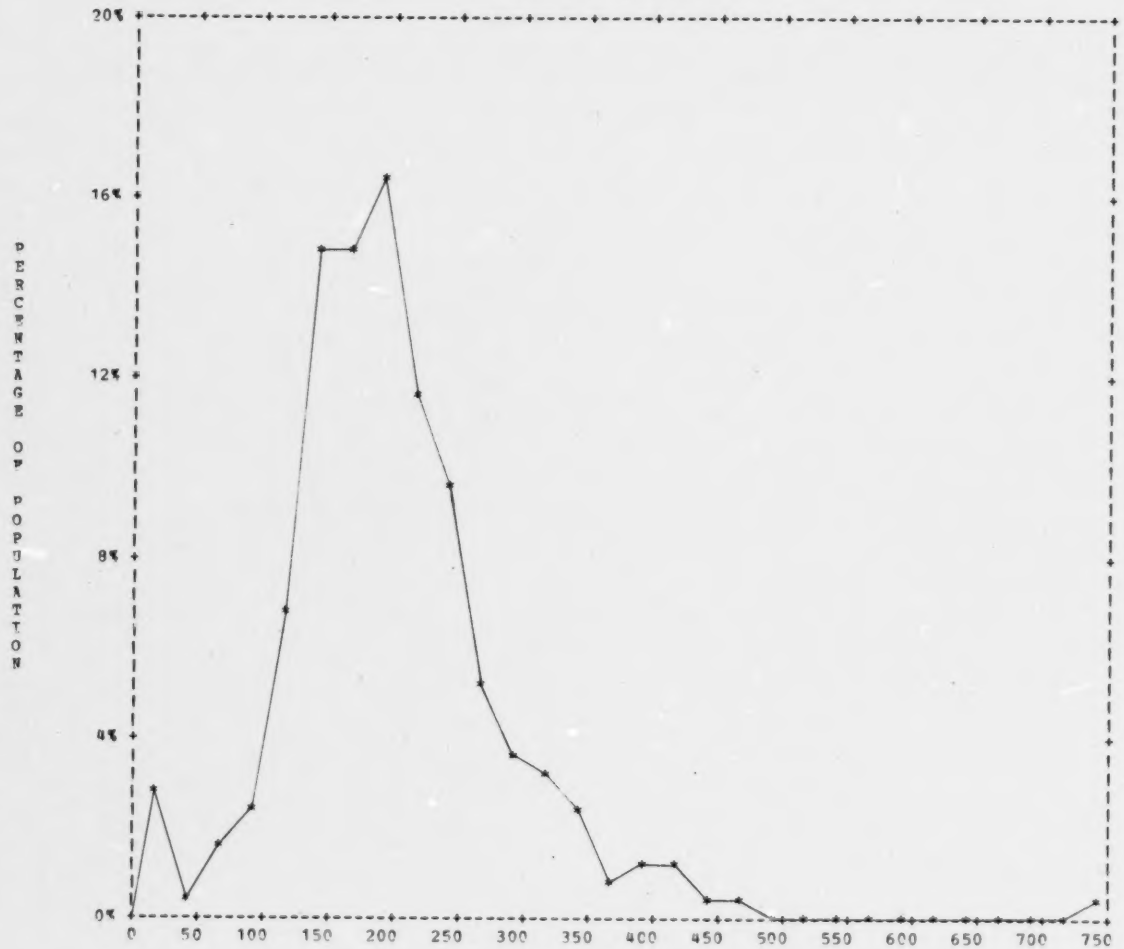


FIGURE 4-2

WORDS PER MINUTE	% IN EACH INTERVAL
0 to 25	2.8%
25 to 50	0.2%
50 to 75	1.5%
75 to 100	2.3%
100 to 125	6.8%
125 to 150	14.7%
150 to 175	14.8%
175 to 200	16.3%
200 to 225	11.7%
225 to 250	9.7%
250 to 275	5.2%
275 to 300	3.6%
300 to 325	3.1%
325 to 350	2.5%
350 to 375	0.7%
375 to 400	1.1%
400 to 425	1.0%
425 to 450	0.6%
450 to 475	0.3%
475 to 500	0.1%
500 to 525	0.2%
525 to 550	0.2%
550 to 575	0.1%
575 to 600	0.1%
600 to 625	0.1%
625 to 650	0.0%
650 to 675	0.0%
675 to 700	0.0%
700 to 725	0.0%
over 725	0.3%

Exhibit 3-1-1

National Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

	Reading Rate			
	<100	100-199	200-299	>300
Passage 1	3.4	50.6	38.0	8.0
Passage 2	4.2	49.9	34.5	11.4

Exhibit 3-1-2

National Results: Reading Rate
Percentage of Young Adults in Each Rate Category

	Reading Rate			
	<100	100-199	200-299	>300
Passage 1	6.9	51.2	35.0	6.9
Passage 2	6.8	52.6	30.2	10.5

Nearly 5% of the young adults and 2% of the 17-year-olds read both passages at rates less than 100 words per minute. Adults and 17-year-olds had similar percentages (41% and 39%) reading both passages within the 100-199 words per minute category, and similar percentages in the next highest rate category (20% for adults and 23% for 17-year-olds). The percentage for 17-year-olds reading both passages at 300 or more words per minute was slightly higher but not very different than the percentage for adults (5% as compared to 4% for adults). (See exhibits C-3 and C-4 in appendix C.)

Comprehension

Approximately 67% of the 17-year-olds responded correctly to four or more of the comprehension exercises on the first passage while a similar percentage of young adults (69%) did so. The percentages for both groups decreased considerably on the comprehension exercises for Passage 2, as exhibits 3-1-3 and 3-1-4 illustrate. The percentage answering four or more comprehension questions correctly decreased for 17-year-olds from 67% on Passage 1 to only slightly more than 31% on Passage 2; the decrease for young adults was not quite so drastic: from 69% on Passage 1 to 43% on Passage 2.

One fourth of the 17-year-olds and slightly more than one third of the young adults correctly answered four or more of the comprehension questions on both passages. For 17-year-olds, 32% of them who had made acceptable (i.e., four or more correct)

Exhibit 3-1-3

National Results: Comprehension
Percentage of 17-Year-Olds in Each Comprehension Category

	3 or fewer correct	4 or more correct
Passage 1	(33.3)	(66.7)
Passage 2	(68.6)	(31.4)

Exhibit 3-1-4

National Results: Comprehension
Percentage of Young Adults in Each Comprehension Category

	3 or fewer correct	4 or more correct
Passage 1	(31.2)	(68.8)
Passage 2	(56.8)	(43.2)

comprehension scores on both passages read both passages within the 100-199 words per minute category; 28% read within the 200-299 rate category; only 1% read less than 100 words per minute; and 5% read 300 words per minute or faster on both passages. Two percent of the young adults who had answered four or more comprehension questions correctly on both passages read less than 100 words per minute; 40% read within the 100-199 rate category; 25% read within the 200-299 rate category; and 3% read 300 or more words per minute on both passages. (See exhibit D-3 and D-4 in appendix D.)

Comprehension within Rate

When the comprehension results (four or more correct responses) are examined in relation to reading rates (exhibits 3-1-5 and 3-1-6), it is evident that for each of the three reading rate categories above 100 words per minute the majority of both 17-year-olds and young adults (between 58% and 74%) correctly answered four or more questions about Passage 1.

The percentages of 17-year-olds and young adult readers in all rate categories who correctly answered four or more questions about Passage 2 were lower than the corresponding percentages for Passage 1. The percentages for 17-year-olds with four or more correct on Passage 2 were only about half as large as those on Passage 1; the decreases from Passage 1 to Passage 2 were not as large for young adults.

At both age levels and on both passages, those readers in the less than 100 words per minute category appeared to comprehend less well than readers in the higher rate categories. For example,

Exhibit 3-1-5

National Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
National					
3 or fewer correct	48.0	33.4	31.1	36.3	33.3
4 or more correct	52.0	66.6	68.9	63.7	66.7

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
National					
3 or fewer correct	81.5	70.0	64.8	69.1	68.6
4 or more correct	18.5	30.0	35.2	30.9	31.4

69% of the 17-year-olds who read between 200 and 299 words per minute answered four or more comprehension questions correctly on the first passage in contrast to only 52% of the 17-year-olds in the less than 100 words per minute category. On Passage 2 the contrast is from 35% to 19% for 17-year-olds in those two rate categories. The contrast for adults is even greater on Passage 1 where only 40% of the young adults reading less than 100 words per minute answered four or more comprehension questions in contrast to 74% of those who read in the 200-299 words per minute category.

Except for the categories of less than 100 and more than 300 words per minute on Passage 1, the percentages of the population answering four or more questions correctly are larger for adults than for 17-year-olds. For example, within the 200-299 words per minute category on Passage 1, 74% of the young adults correctly answered four or more comprehension exercises in comparison with 69% of the 17-year-olds on the same material; on Passage 2 50% of the adults and 35% of the 17-year-olds in the 200-299 rate category answered four or more questions correctly.

Using the criteria of four or more correct answers to the comprehension exercises on both passages and reading both passages within the same rate category, adults had higher percentages than

Exhibit 3-1-6

National Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
National					
3 or fewer correct	60.5	29.6	25.7	41.6	31.2
4 or more correct	39.5	70.4	74.3	58.4	68.8

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
National					
3 or fewer correct	76.6	58.0	49.9	57.5	56.8
4 or more correct	23.4	42.0	50.1	42.5	43.2

17-year-olds in all rate categories except 300 or more words per minute. In that highest rate category, 27% of the 17-year-olds had acceptable comprehension scores while a not too very different 23% of adults did the same. Young adults had a slightly larger percentage within the less than 100 words per minute category: 15% compared to 12% for 17-year-olds. But the adult superiority shows in the two middle categories where 36% of the adults and only 21% of the 17-year-olds who read both passages within the 100-199 words per minute category had four or more correct answers to the comprehension questions on both passages, and where 47% of the adults and 32% of the 17-year-olds who had read both passages at a rate between 200 and 299 words per minute correctly answered four or more comprehension questions on both passages. (See exhibits C-3 and C-4 in appendix C.)

The relationship of the percentages of the population of 17-year-olds and of young adults scoring four or more correct to the percentages reading within the four rate categories is illustrated in the graphs which follow.

Figure 3-3

COMPREHENSION WITHIN RATE

National: 17-Year-Olds

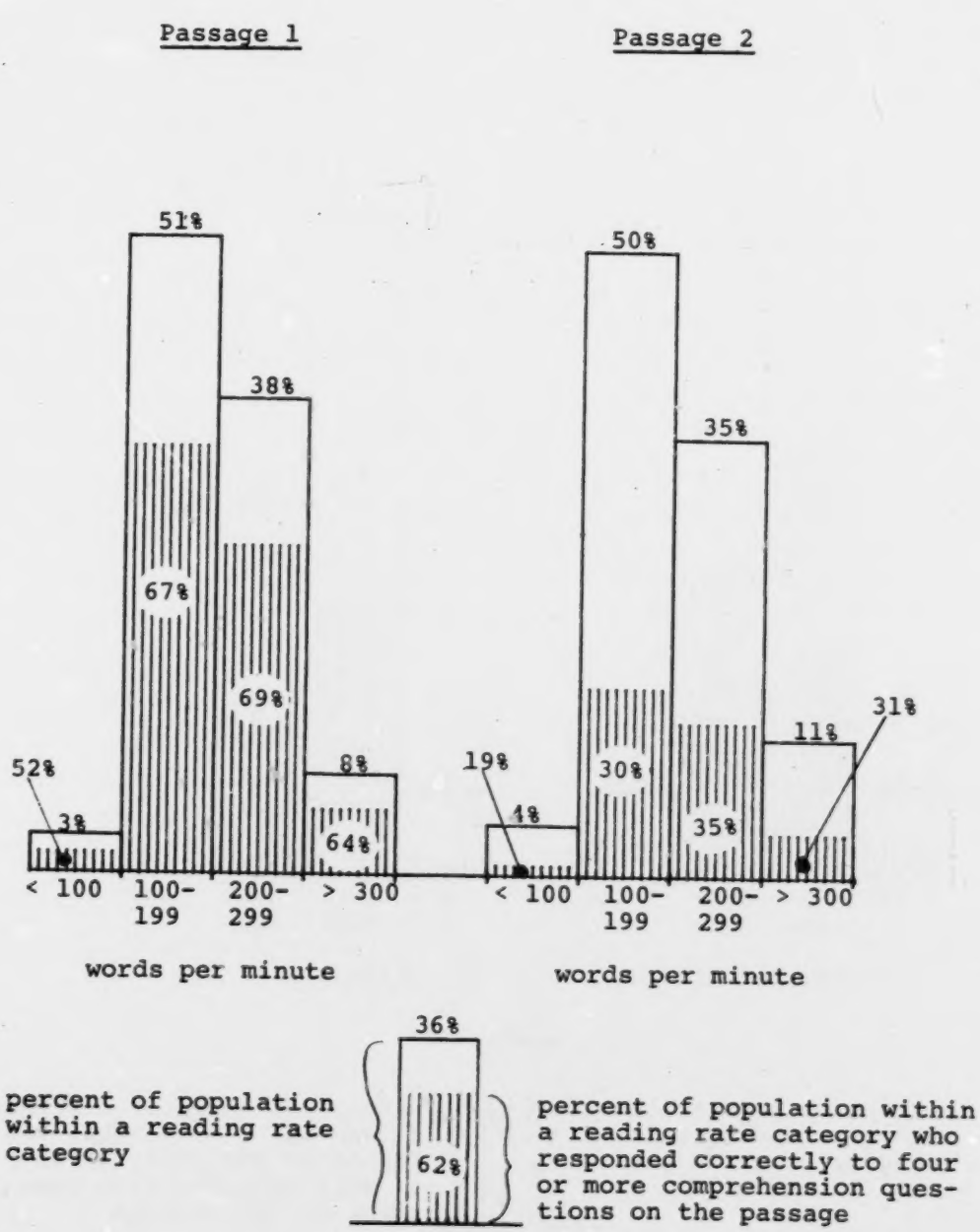
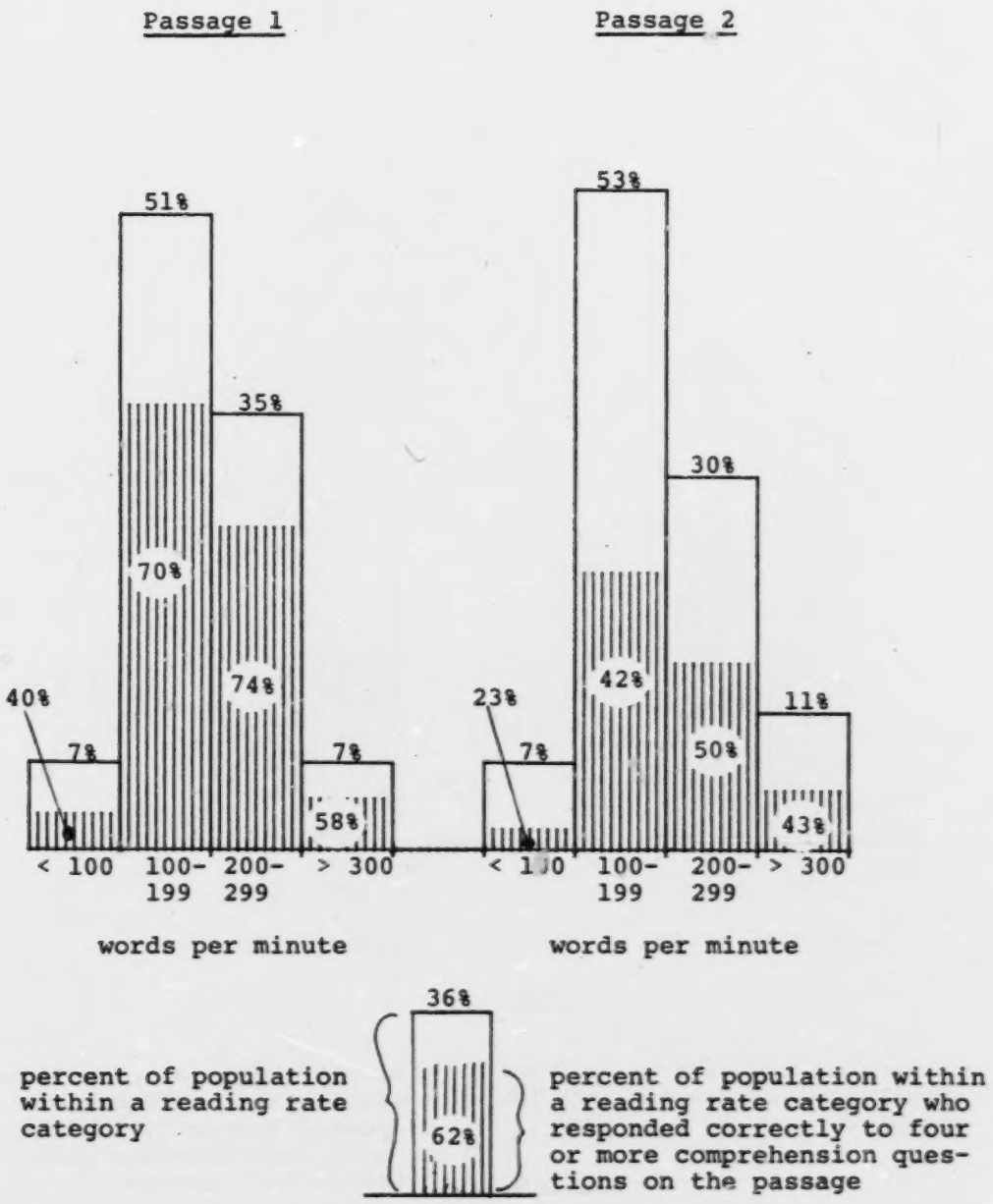


Figure 4-3

COMPREHENSION WITHIN RATE

National: Young Adults



Results by Region

Reading Rate

About 40% of Western 17-year-olds and young adults read between 200 and 299 words per minute on Passage 1, a greater percentage than those found for people from the other regions of

Exhibit 3-2-1

Regional Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	≤100	100-199	200-299	≥300
National	3.4	50.6	38.0	8.0
Northeast	4.0	53.0	34.9	8.1
*Difference	(0.5)	(2.4)	(-3.0)	(0.1)
Southeast	3.3	57.5	33.6	5.6
Difference	(-0.2)	(6.9)	(-4.4)	(-2.4)
Central	1.8	49.5	39.4	9.3
Difference	(-1.6)	(-1.1)	(1.4)	(1.3)
West	5.0	43.4	43.3	8.3
Difference	(1.6)	(-7.2)	(5.3)	(0.3)

Passage 2

	Reading Rate			
	≤100	100-199	200-299	≥300
National	4.2	49.9	34.5	11.4
Northeast	3.3	54.6	33.9	8.1
Difference	(-0.9)	(4.8)	(-0.6)	(-3.3)
Southeast	5.2	56.1	29.5	9.2
Difference	(0.9)	(6.2)	(-5.0)	(-2.1)
Central	2.8	45.9	36.5	14.8
Difference	(-1.5)	(-4.0)	(2.0)	(3.4)
West	6.2	44.2	37.0	12.6
Difference	(2.0)	(-5.7)	(2.5)	(1.2)

*Difference from national percentage.

the country. In comparison, in the Southeast, only 26% of young adults read at rates that high. On Passage 2 fewer 17-year-olds from the Southeast read at rates greater than 200 words per minute than did students from other regions, and a larger percentage of young adults from the West read at rates greater than

Regional Results: Reading Rate
Percentage of Young Adults in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	≥300
National	6.9	51.2	35.0	6.9
Northeast	4.9	55.9	33.9	5.2
*Difference	(-2.0)	(4.7)	(-1.1)	(-1.6)
Southeast	12.7	56.0	26.2	5.1
Difference	(5.8)	(4.8)	(-8.8)	(-1.7)
Central	8.6	52.3	33.5	5.5
Difference	(1.7)	(1.1)	(-1.5)	(-1.3)
West	3.4	41.6	43.8	11.2
Difference	(-3.6)	(-9.6)	(8.8)	(4.3)

Passage 2

	Reading Rate			
	<100	100-199	200-299	≥300
National	6.8	52.6	30.2	10.5
Northeast	6.6	54.2	31.0	8.3
Difference	(-0.2)	(1.6)	(0.8)	(-2.2)
Southeast	10.5	57.0	26.1	6.4
Difference	(3.8)	(4.4)	(-4.1)	(-4.1)
Central	6.6	58.5	25.4	9.5
Difference	(-0.2)	(6.0)	(-4.8)	(-1.0)
West	4.6	41.5	37.3	16.7
Difference	(-2.2)	(-11.1)	(7.1)	(6.2)

*Difference from national percentage.

100 words per minute than did adults from the other three regions. Nearly 55% of the young adult population from the West read each

passage at 200 or more words per minute; the next largest percentage for other regions was less than 40%.

In comparison with 17-year-olds, greater percentages of adults in all geographical regions except the West read fewer than 100 words per minute on both passages. For the Central and Southeastern regions more than twice as large a percentage of young adults as compared to 17-year-olds read either passage at less than 100 words per minute. In the West, however, a greater percentage of 17-year-olds than adults read below 100 words per minute. This difference is reinforced at the opposite end of the reading rate scale in the >300 words per minute category where the percentages of 17-year-olds are either approximately equal to or larger than those for adults in all geographical regions except the West. In the West, the percentages of adults who read in excess of 300 words per minute exceed the percentages of 17-year-olds in the same category on both passages.

Among 17-year-olds who read both passages at less than 100 words per minute, those from the West had the largest percentage (4%) while all other regions had less than half that percentage. Adults from the West, on the other hand, exhibited the smallest percentage reading less than 100 words per minute on both passages (3%), while the Southeast region had the largest percentage (9%) within that rate category. The West was again lowest for both 17-year-olds and young adults who read both passages at a rate between 100 and 199 words per minute. However, the West showed the largest percentages for both 17-year-olds (25%) and young adults (23%) reading both passages within the 200-299 words per minute category, and Western adults registered the largest percentage (5%) reading both passages at 300 or more words per minute. (For other percentages, please refer to exhibits C-3 and C-4 in appendix C.)

Comprehension

As in the examination of reading rate, percentages of both 17-year-olds and young adults from the Southeast who correctly answered four or more comprehension questions are considerably below the percentages of people in the other regions of the country on the first passage. Only 58% of the 17-year-olds and 53% of the young adults in the Southeast responded correctly to four or more of the comprehension questions after reading the first passage. In contrast, as exhibits 3-2-3 and 3-2-4 show, between 66% and 76% of the 17-year-olds and adults from the other three regions answered four or more questions correctly on that first passage.

In comparison with Passage 1, the percentages of 17-year-olds having acceptable (i.e., four or more correct) comprehension

Exhibit 3-2-3

Regional Results: Comprehension
Percentage of 17-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	33.3	66.7
Northeast	28.5	71.5
*Difference	(-4.8)	(4.8)
Southeast	41.8	58.2
Difference	(8.5)	(-8.5)
Central	31.4	68.6
Difference	(-1.9)	(1.9)
West	33.7	66.3
Difference	(0.4)	(-0.4)

Passage 2

	3 or fewer correct	4 or more correct
National	68.6	31.4
Northeast	64.0	36.0
Difference	(-4.6)	(4.6)
Southeast	71.0	29.0
Difference	(2.3)	(-2.3)
Central	71.9	28.1
Difference	(3.3)	(-3.3)
West	67.7	32.3
Difference	(-0.9)	(0.9)

*Difference from national percentage.

Exhibit 3-2-4

Regional Results: Comprehension
Percentage of Young Adults in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	31.2	68.8
Northeast	31.4	68.6
*Difference	(0.2)	(-0.2)
Southeast	46.9	53.1
Difference	(15.7)	(-15.7)
Central	27.9	72.1
Difference	(-3.3)	(3.3)
West	23.8	76.2
Difference	(-7.4)	(7.4)

Passage 2

	3 or fewer correct	4 or more correct
National	56.8	43.2
Northeast	59.2	40.8
Difference	(2.4)	(-2.4)
Southeast	68.1	31.9
Difference	(11.3)	(-11.3)
Central	54.6	45.4
Difference	(-2.2)	(2.2)
West	48.8	51.2
Difference	(-8.0)	(8.0)

*Difference from national percentage.

scores on Passage 2 was only about half as large within each of the four regions. The decrease from Passage 1 to Passage 2 was not as pronounced for the young adult population.

Whereas 17-year-olds from the Northeast had the largest percentage who answered four or more questions correctly on each passage, young adults from that geographical region ranked third in the percentage having four or more correct.

Adults from the Central and Western regions outperformed their counterparts from the other two regions in percentages having four or more correct responses on each passage. Adults from the Northeast and Southeast regions did not have appreciably different percentages than did 17-year-olds from the same geographical regions. However, young adults from the Central and Western regions had far larger percentages answering four or more correct than did their 17-year-old counterparts.

Almost identical percentages (22%) of 17-year-olds and young adults from the Southeast region correctly answered four or more comprehension questions on both passages. For each age group, that 22% was the lowest percentage having acceptable comprehension scores on both passages. The Northeast had the largest percentage (30%) for 17-year-olds scoring four or more on both passages, while the West excelled among the young adults with 45%. Adults had considerably larger percentages answering four or more comprehension questions correctly than did 17-year-olds in all regions but the Southeast. (See exhibits D-3 and D-4 in appendix D.)

Exhibit D-3 also shows that the largest percentages of 17-year-olds who had correctly answered four or more comprehension questions on both passages read within the 100-199 words per minute category and were from the Southeast and the Northeast. The largest percentages from the Central and Western regions read within the 200-299 words per minute category on both passages. With young adults, the largest percentages for each region occurred within the 100-199 rate category. At the extreme rate categories, the percentages of 17-year-olds who read 300 or more words per minute and who had correctly responded to four or more comprehension questions were larger than the percentage who had read less than 100 words per minute (in all four regions). But for adults, the Northeast, Southeast, and Central regions had larger percentages within the <100 words per minute category than in the >300 words per minute category; the opposite, however, occurred for Western adults who had less than 1% within the <100 rate category and 5% in the >300 rate category on both passages.

Comprehension within Rate

The comparison of comprehension percentages can be seen more clearly when examined within each of the four rate categories, as illustrated in exhibits 3-2-5, 3-2-6, 3-2-7, and 3-2-8. Within all rate categories the Southeast region, as can be seen in exhibit 3-2-5, contained the smallest percentage of 17-year-olds who correctly answered four or more comprehension exercises on Passage 1. The Southeast, as exhibit 3-2-7 shows, also had the smallest percentages of adults who had four or more correct on the comprehension exercises and who had read within the 100-199 and 200-299 words per minute categories on the first passage. Southeastern adults exhibited the smallest percentages having four or more correct answers within all four rate categories on Passage 2 as well. Seventeen-year-olds from the Southeast, however, had the second largest percentages (of four or more comprehension answers correct) within the 0-199 words per minute categories on Passage 2.

Exhibit 3-2-5

Regional Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Northeast					
3 or fewer correct	51.5	25.0	31.7	27.0	28.5
4 or more correct	48.5	75.0	68.3	73.0	71.5
Southeast					
3 or fewer correct	73.8	43.8	33.6	51.0	41.8
4 or more correct	26.2	56.2	66.4	49.0	58.2
Central					
3 or fewer correct	32.7	32.4	29.0	36.7	31.4
4 or more correct	67.3	67.6	71.0	63.3	68.6
West					
3 or fewer correct	37.8	34.8	31.4	37.3	33.7
4 or more correct	62.2	65.2	68.6	62.7	66.3

In contrast, Central 17-year-olds achieved the largest percentages of the population having more than three correct responses to the [illegible] comprehension questions within the 0-100 and the 200-299 words per minute categories on Passage 1, though there was not much difference among regional percentages within the 200-299 words per minute category. The largest percentages of adults scoring four or more correct within the 0-100 and the 200-299 words per minute categories on Passage 2 were also from the

Exhibit 3-2-6

Regional Results: Comprehension Within Rate
Percentage of [illegible]ear-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Northeast					
3 or fewer correct	99.7	65.2	59.6	59.6	64.0
4 or more correct	0.3	34.8	40.4	40.4	36.0
Southeast					
3 or fewer correct	77.9	69.9	68.8	80.7	71.0
4 or more correct	22.1	30.1	31.2	19.3	29.0
Central					
3 or fewer correct	66.8	73.7	68.1	76.4	71.9
4 or more correct	33.2	26.3	31.9	23.6	28.1
West					
3 or fewer correct	81.2	72.2	63.4	58.1	67.7
4 or more correct	18.8	27.8	36.6	41.9	32.3

Central region. On Passage 1, the contrast between percentages for Central and Southeastern 17-year-olds within the less than 100 words per minute category was 67% compared to only 26% for Southeastern 17-year-olds.

The Northeast region contained the largest percentages of 17-year-olds who scored four or more correct within the 100-199

and the >300 words per minute categories on Passage 1. In comparison, on Passage 2, that same region contained the largest percentages of "4 or more correct" within the 100-299 words per minute categories and the second largest percentages within the >300 words per minute category. However, the Northeast region

Exhibit 3-2-7

Regional Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Northeast					
3 or fewer correct	39.7	28.7	31.5	53.4	31.4
4 or more correct	60.3	71.3	68.5	46.6	68.6
Southeast					
3 or fewer correct	77.6	47.2	30.0	53.3	46.9
4 or more correct	22.4	52.8	70.0	46.7	53.1
Central					
3 or fewer correct	44.9	23.6	26.1	52.3	27.9
4 or more correct	55.1	76.4	73.9	47.7	72.1
West					
3 or fewer correct	92.0	22.9	18.7	26.4	23.8
4 or more correct	8.0	77.1	81.3	73.6	76.2

had the lowest percentage (less than 1%) who correctly answered more than three comprehension questions and who read at a rate less than 100 words per minute (see exhibit 3-2-6); that extremely small percentage was the lowest having four or more correct within any rate category for any region on either passage for 17-year-olds as well as for adults. Within the <100 words per minute category on Passage 1 for young adults, the Northeast exhibited the largest percentage having four or more correct: 60%.

As exhibits 3-2-7 and 3-2-8 indicate, the young adult group from the West contained the largest percentages of the population answering four or more comprehension questions correctly within

Exhibit 3-2-8

Regional Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Northeast					
3 or fewer correct	71.0	61.7	50.8	64.9	59.2
4 or more correct	29.0	38.3	49.2	35.1	40.8
Southeast					
3 or fewer correct	89.3	68.6	58.3	68.6	68.1
4 or more correct	10.7	31.4	41.7	31.4	31.9
Central					
3 or fewer correct	69.0	56.3	44.9	60.2	54.6
4 or more correct	31.0	43.7	55.1	39.8	45.4
West					
3 or fewer correct	77.0	45.5	48.8	49.1	48.8
4 or more correct	23.0	54.5	51.2	50.9	51.2

the 100-199 and the >300 words per minute categories on both passages. Except for the West's relatively large percentage (74%) of adults who responded correctly to four or more comprehension questions within the 300 or more words per minute category, the percentages of adults in the other three regions who read within that same rate category remained nearly the same: about 47%.

On Passage 2, the percentages of adults scoring four or more correct were less than those for adults on Passage 1 in most rate categories, except for Western adults who had read at less than 100 words per minute on the second passage. The percentage for that group rose from a low 8% on the first passage to 23% on the second.

When young adults are compared with 17-year-olds, adults in the Northeast gained larger percentages having four or more

correct responses than did 17-year-olds from the same region within the less than 100 words per minute category on both passages. At the 300 or more words per minute category, adults from the West had larger percentages of four or more correct responses than did 17-year-olds on both passages. Adults from Central and Western regions had larger percentages of their groups scoring four or more correct responses on the comprehension exercises within the 100-199 words per minute reading rate category on both passages; percentages of adults from all regions with four or more correct exceeded percentages of 17-year-olds who read within the 200-299 words per minute category on both passages. On the other hand, 17-year-olds from the Northeast showed larger percentages of four or more correct on the comprehension exercises after reading at rates in excess of 300 words per minute on both passages than did adults from the same region.

Nearly one fourth of the 17-year-olds who read both passages at less than 100 words per minute answered four or more comprehension questions correctly on both passages; that was twice the percentage of the next largest, the Western region. Within that rate category, less than 1% of the Northeastern 17-year-olds had attained acceptable (i.e., four or more right) comprehension scores on both passages. The Northeast, however, had the largest percentages of acceptable comprehension scores on both passages within all of the other three rate categories, as exhibit C-3 in appendix C shows. In fact, the 44% of the 17-year-olds who had acceptable comprehension scores and who had read both passages in excess of 300 words per minute was the highest percentage scoring four or more correct within any of the rate categories for any of the subgroups in the study of 17-year-olds.

In most cases, young adults who read both passages within the same rate category had higher percentages with good comprehension scores on both passages than did 17-year-olds in comparable regional groups. The Central region showed the largest percentages answering four or more comprehension questions correctly on both passages after reading both passages within the less than 100 and between 200 and 299 words per minute categories. The young adults from the West had the largest percentages within the 100-199 and the 300 or more words per minute categories. As can be observed in exhibit C-4 in appendix C, 44% of the young adults from the West who had read both passages at 300 or more words per minute correctly answered four or more comprehension questions on both passages. In contrast, only 9% of the young adults from the Northeast, 13% from the Southeast, and 16% from the Central regions who read both passages within that same rate category were able to answer four or more correctly on both passages.

Results by Sex

Reading Rate

In the 17-year-old group a larger percentage of females compared to males read at rates between 200 and 299 words per minute on each passage. Nearly the same percentages of males and females read in excess of 300 words per minute on Passage 2. On Passage 1, as exhibit 3-3-1 indicates, the percentage of 17-year-old males was more than three times as great as the percentage of females reading below 100 words per minute.

Exhibit 3-3-1

Sex Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	≤100	100-199	200-299	≥300
National	3.4	50.6	38.0	8.0
Male	5.1	53.6	33.9	7.4
*Difference	(1.7)	(3.0)	(-4.1)	(-0.6)
Female	1.7	47.5	42.1	8.6
Difference	(-1.7)	(-3.1)	(4.2)	(0.6)

Passage 2

	Reading Rate			
	≤100	100-199	200-299	≥300
National	4.2	49.9	34.5	11.4
Male	5.2	51.4	31.8	11.5
Difference	(1.0)	(1.6)	(-2.7)	(0.1)
Female	3.2	48.3	37.3	11.3
Difference	(-1.0)	(-1.6)	(2.8)	(-0.1)

*Difference from national percentage.

With young adults, exhibit 3-3-2 shows that a slightly larger but not significant percentage of females as compared to males read at rates between 100 and 199 words per minute on each

passage. For those young adults who read less than 100 words per minute, males exhibited a significantly larger percentage than did females. On Passage 1, in fact, the percentage of males reading less than 100 words per minute was more than twice that of females, though the spread between percentages was not as great on Passage 2.

Exhibit 3-3-2

Sex Results: Reading Rate
Percentage of Young Adults in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	6.9	51.2	35.0	6.9
Male	9.5	48.8	35.3	6.3
*Difference	(2.6)	(-2.4)	(0.3)	(-0.6)
Female	4.4	53.5	34.7	7.4
Difference	(-2.5)	(2.3)	(-0.3)	(0.5)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	6.8	52.6	30.2	10.5
Male	8.6	50.4	29.3	11.6
Difference	(1.9)	(-2.2)	(-0.8)	(1.1)
Female	5.0	54.7	31.0	9.4
Difference	(-1.8)	(2.1)	(0.8)	(-1.1)

*Difference from national percentage.

Differences in percentages of 17-year-old males and females reading both passages within the same rate categories were not especially great, although males had larger percentages within the two lowest rate categories, females were higher within the 200-299 rate category, and both sexes were quite similar at 300 or more words per minute, as can be seen in exhibit C-3 in appendix C. Exhibit C-4 shows that more male adults read within the less than 100 words per minute category, more females read within the highest rate category, and males and females were quite similar within the other two rate categories on both passages.

Comprehension

Although the previous results seem to indicate that there was little difference in reading rates between males and females within the two age groups, the results on the comprehension exercises show that on Passage 1, more males than females from both the 17-year-old group and the young adult group correctly answered four or more questions. Exhibits 3-3-3 and 3-3-4, however, indicate that the performances of 17-year-old and adult males were not very different from those of 17-year-old and adult females on the more difficult second passage. It is of note in comparing 17-year-olds and young adults that there was little difference between the age groups on Passage 1 while adults had a much higher percentage of their group answering four or more exercises correctly on Passage 2.

Exhibit 3-3-3

Sex Results: Comprehension
Percentage of 17-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	33.3	66.7
Male	28.9	71.1
*Difference	(-4.4)	(4.4)
Female	37.8	62.2
Difference	(4.5)	(-4.5)

Passage 2

	3 or fewer correct	4 or more correct
National	68.6	31.4
Male	69.6	30.4
Difference	(1.0)	(-1.0)
Female	67.6	32.4
Difference	(-1.0)	(1.0)

*Difference from national percentage.

Nearly identical percentages of male (26%) and female (25%) 17-year-olds answered four or more comprehension questions correctly on both passages. Male young adults had a slightly larger percentage (38%) than did females (35%) answering four or more questions correctly on both passages. (See exhibits D-3 and D-4 in appendix D.)

Exhibit 3-3-4

Sex Results: Comprehension
Percentage of Young Adults in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	31.2	68.8
Male	28.9	71.1
*Difference	(-2.3)	(2.3)
Female	33.4	66.6
Difference	(2.2)	(-2.2)

Passage 2

	3 or fewer correct	4 or more correct
National	56.8	43.2
Male	55.1	44.9
Difference	(-1.7)	(1.7)
Female	58.4	41.6
Difference	(1.6)	(-1.6)

*Difference from national percentage.

Comprehension within Rate

An examination of comprehension (four or more correct) within the four reading rate categories on Passage 1 (see exhibits 3-3-5 and 3-3-6) reveals that male 17-year-olds had higher percentages than females within each rate category. On that same passage, a larger percentage of young adult males had four or more correct than did females within the 100-299 words per minute categories; the adult females were higher within the two extreme rate categories.

On Passage 2, using the same criteria, the percentages of 17-year-old females in the "4 or more correct" category were slightly larger than those of 17-year-old males in the >300 category, about the same within the 100-299 words per minute categories, and considerably larger (29% compared to 13% for males) within the 0-100 rate category.

Adult females do not show that lead on the second passage, however, On Passage 2, young adult males have a slight edge within the 100-299 words per minute categories and are superior (56% as compared to 27%) within the >300 words per minute category. Within the less than 100 words per minute category, however, 35% of the adult females correctly responded to four or more of the comprehension exercises in contrast to only 16% of the adult males. In comparing young adults' comprehension percentages (of four or more correct) in the 300 or more words per minute category on both passages, the reader can see from exhibit 3-3-6 that males show 52% on Passage 1 and 56% on Passage 2, while adult females show 64% on Passage 1 but only 27% on Passage 2.

For those young adult males who read both passages at 300 or more words per minute, 26% of them answered four or more comprehension questions correctly on both passages in comparison to 21% of the females who read both passages within that highest rate category. Males and females were very similar (46% and 47%) within the 200-299 rate category, but a larger percentage (38%) of male adults in comparison with 33% of female adults who read both passages within the 100-199 words per minute category correctly answered four or more questions on both passages. However, more than one-third of the adult females who read both passages at less than 100 words per minute had four or more correct responses to the comprehension questions on both passages in contrast to only 6% of the male adults. (See exhibit C-4 in appendix C.)

Exhibit 3-3-5

Sex Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Male					
3 or fewer correct	45.9	30.6	22.3	34.6	28.9
4 or more correct	54.1	69.4	77.7	65.4	71.1
Female					
3 or fewer correct	54.6	36.7	38.4	37.7	37.8
4 or more correct	45.4	63.3	61.6	62.3	62.2

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Male					
3 or fewer correct	87.5	70.2	65.2	71.4	69.6
4 or more correct	12.5	29.8	34.8	28.6	30.4
Female					
3 or fewer correct	71.3	69.9	64.5	66.8	67.6
4 or more correct	28.7	30.1	35.5	33.2	32.4

Exhibit 3-3-6

Sex Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Male					
3 or fewer correct	67.8	24.8	20.8	47.9	28.9
4 or more correct	32.2	75.2	79.2	52.1	71.1
Female					
3 or fewer correct	45.6	33.9	30.4	36.5	33.4
4 or more correct	54.4	66.1	69.6	63.5	66.6

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Male					
3 or fewer correct	83.9	56.1	49.2	44.4	55.1
4 or more correct	16.1	43.9	50.8	55.6	44.9
Female					
3 or fewer correct	64.6	59.7	50.6	73.1	58.4
4 or more correct	35.4	40.3	49.4	26.9	41.6

About 13% of the male 17-year-olds, on the other hand, who had read both passages at less than 100 words per minute correctly answered four or more comprehension questions on both passages, in contrast to 6% of the female 17-year-olds. A similar percentage (21%) of males and females who read within the 100-199 rate category answered four or more questions correctly on both passages, but a larger percentage of females than males (25% to 20%) who read both passages within the 200-299 rate category had acceptable comprehension scores on both passages. Females were also slightly ahead within the 300 or more words per minute category, 29% to 26%. (See exhibit C-3 in appendix C.)

Results by Race

Reading Rate

For 17-year-olds as well as for young adults, a larger percentage of Blacks compared to Whites read less than 100 words per minute on both passages. The percentage of Black 17-year-olds reading less than 100 words per minute was nearly 12% for Passage 1 and 11% for Passage 2, in contrast to only 2% and 3%, respectively, for White 17-year-olds. (See exhibit 3-4-1.) For Black adults, approximately one fourth read below 100 words per minute on both passages, in contrast to only 4% for Whites.

Exhibit 3-4-1

Race Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	3.4	50.6	38.0	8.0
White	2.2	48.5	40.7	8.6
*Difference	(-1.2)	(-2.1)	(2.7)	(0.6)
Black	11.7	67.4	17.8	3.1
Difference	(8.3)	(16.8)	(-20.1)	(-4.9)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	4.2	49.9	34.5	11.4
White	3.4	48.6	36.3	11.8
Difference	(-0.9)	(-1.3)	(1.7)	(0.4)
Black	10.6	59.0	23.0	7.4
Difference	(6.3)	(9.1)	(-11.5)	(-4.0)

*Difference from national percentage.

Approximately 49% of White 17-year-olds read Passage 1 in excess of 200 words per minute; 48% did so on Passage 2. In comparison, only 21% of the Black 17-year-olds read Passage 1 in

excess of 200 words per minute; 30% of them did so on Passage 2. About 45% of the White adults read Passage 1 at 200 or more words per minute compared to only 18% of the Blacks. On Passage 2, 43% of the Whites read 200 or more words per minute, while 25% of the Blacks did so.

Exhibit 3-4-2

Race Results: Reading Rate
Percentage of Young Adults in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	6.9	51.2	35.0	6.9
White	3.9	51.0	37.9	7.2
*Difference	(-3.0)	(-0.2)	(2.9)	(0.3)
Black	27.2	54.6	13.8	4.4
Difference	(20.3)	(3.4)	(-21.2)	(-2.4)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	6.8	52.6	30.2	10.5
White	4.1	52.8	32.2	10.9
Difference	(-2.7)	(0.2)	(2.0)	(0.4)
Black	23.0	52.4	15.3	9.3
Difference	(16.2)	(-0.2)	(-14.8)	(-1.2)

*Difference from national percentage.

A far larger percentage of Blacks compared to Whites read both passages at less than 100 words per minute; that holds true for 17-year-olds as well as for young adults. Nearly half of the 17-year-old Black population read both passages within the 100-199 words per minute category, in contrast to 37% of the White population. Blacks and Whites in the young adult group had almost identical percentages who read within the 100-199 rate category. But larger percentages of Whites read both passages at the higher rates. Nearly 25% of 17-year-old Whites read both passages at 200-299 words per minute in contrast to only 9% of the Blacks, and 21% of young adult Whites read within that rate category in

comparison to only 5% of the Blacks. Although about 4% of both White and Black adults read both passages at 300 or more words per minute, 5% of the 17-year-old Whites read 300 or more words per minute on both passages in contrast to less than 2% of the Black 17-year-olds. (See exhibits C-3 and C-4 in appendix C.)

Comprehension

Greater percentages of 17-year-old and young adult Whites correctly answered four or more comprehension questions on each passage in comparison to Blacks in the same age groups. On Passage 1--as exhibits 3-4-3 and 3-4-4 illustrate--70% or more White 17-year-olds and young adults responded correctly to more than three comprehension exercises while only about 43% of Black 17-year-olds and young adults did so.

Exhibit 3-4-3

Race Results: Comprehension
Percentage of 17-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	33.3	66.7
White	30.0	70.0
*Difference	(-3.3)	(3.3)
Black	56.8	43.2
Difference	(23.5)	(-23.5)

Passage 2

	3 or fewer correct	4 or more correct
National	68.6	31.4
White	67.4	32.6
Difference	(-1.2)	(1.2)
Black	76.7	23.3
Difference	(8.1)	(-8.1)

*Difference from national percentage.

Exhibit 3-4-4

Race Results: Comprehension
Percentage of Young Adults in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	31.2	68.8
White	28.4	71.6
*Difference	(-2.9)	(2.9)
Black	57.5	42.5
Difference	(26.2)	(-26.2)

Passage 2

	3 or fewer correct	4 or more correct
National	56.8	43.2
White	55.0	45.0
Difference	(-1.8)	(1.8)
Black	73.2	26.8
Difference	(16.4)	(-16.4)

*Difference from national percentage.

It should also be noted that a larger percentage (45%) of young adult Whites had four or more correct responses after reading the more difficult second passage than did 17-year-old Whites (33%) on the same passage. Black adults were not very different from Black 17-year-olds on either passage.

More than one fourth of the White 17-year-olds answered four or more of the comprehension questions correctly on both passages, while only 15% of the Black 17-year-olds did so. That 15% was the lowest percentage of acceptable (i.e., four or more right) comprehension scores on both passages for any of the subgroups in the study of 17-year-olds or young adults. The lowest percentage for any of the subgroups among the adult population who correctly answered four or more comprehension questions on both passages was made by Blacks: 19%. In contrast, 38% of the White adults correctly answered four or more questions on both passages. Exhibit D-3 and D-4 show what percentages of each of those groups read within each rate category, the majority of Black 17-year-olds as well as adults reading within the 100-199 words per minute category, and large percentages of White 17-year-olds and adults reading within both the 100-199 and the 200-299 words per minute categories.

Comprehension within Rate

For both 17-year-olds and young adults the percentages of Whites answering four or more comprehension questions correctly were larger than those for Blacks within all four rate categories on both passages. The smallest differences between percentages for Blacks and Whites was within the 100-199 words per minute category for 17-year-olds on Passage 2 where 31% of the Whites answered more than three comprehension questions correctly in comparison to 28% of the Blacks. Generally, for both 17-year-olds and young adults, the largest differences between percentages for Whites and Blacks was within the two extreme rate categories. In one case--for 17-year-olds reading less than 100 words per minute on Passage 1--21% of the Blacks correctly answered four or more of the comprehension questions in comparison to 75% of the Whites. The spread between the percentages was not as large within the young adult population as it was within the population of 17-year-olds, though the same patterns are visible (see exhibits 3-4-5 and 3-4-6).

Exhibit 3-4-5

Race Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
White					
3 or fewer correct	24.7	29.8	29.4	34.9	30.0
4 or more correct	75.3	70.2	70.6	65.1	70.0
Black					
3 or fewer correct	79.1	51.3	58.5	84.1	56.8
4 or more correct	20.9	48.7	41.5	15.9	43.2

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
White					
3 or fewer correct	79.2	69.5	63.2	68.1	67.4
4 or more correct	20.8	30.5	36.8	31.9	32.6
Black					
3 or fewer correct	85.4	72.5	82.5	80.2	76.7
4 or more correct	14.6	27.5	17.5	19.8	23.3

As can be seen in exhibits C-3 and C-4 in appendix C, larger percentages of both 17-year-old and young adult Whites who had read both passages within the same rate categories answered four or more comprehension questions correctly on both passages in comparison to Blacks who had read both passages within the same rate categories. That holds true for all four rate categories. For example, only 9% of the Black 17-year-olds who had read both passages at a rate between 200 and 299 words per minute correctly answered four or more comprehension questions on both passages, in contrast to 33% of the Whites who had read both passages within that same rate category. The difference between Blacks

Exhibit 3-4-6

Race Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
White					
3 or fewer correct	56.6	26.9	25.4	38.9	28.4
4 or more correct	43.4	73.1	74.6	61.1	71.6
Black					
3 or fewer correct	73.8	54.1	34.1	71.2	57.5
4 or more correct	26.2	45.9	65.9	28.8	42.5

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
White					
3 or fewer correct	71.9	57.6	48.3	55.7	55.0
4 or more correct	28.1	42.4	51.7	44.3	45.0
Black					
3 or fewer correct	95.5	64.3	69.3	74.5	73.2
4 or more correct	4.5	35.7	30.7	25.5	26.8

and Whites is not so great within the 100-199 rate category for 17-year-olds, however, or within the three categories above 100 words per minute for adults.

Results by Parental Education

Reading Rate

Within the 200-299 words per minute category, as the educational level of the parents increased, the percentage of both 17-year-olds and young adults increased on Passage 1. On Passage 2, the same increase occurred for 17-year-olds within that 200-299 words per minute category; for adults, however, the increase occurred only through the last three educational categories, with the "no high school" group having a slightly larger percentage than that of the "some high school" group.

As can be observed in exhibits 3-5-1 and 3-5-2, the percentages of both 17-year-olds and young adults reading at 200 words per minute or faster are fairly similar for all educational levels across both passages, although the percentages at rates over 300 words per minute increased for Passage 2.

The percentage of 17-year-olds in the "post high school" category is nearly double the percentage in the "no high school" category on both passages for rates in excess of 200 words per minute. For Passage 1, the percentage of 17-year-olds reading less than 100 words per minute and whose parents had no high school education is almost four times as great as those whose parents had a post high school education. For Passage 2 the percentage of 17-year-olds in the "no high school" group who read less than 100 words per minute increased to nearly five times the percentage for the "post high school" group.

Young adults whose parents had no high school education seemed--according to the data presented in exhibit 3-5-2--to be far more likely to read at rates below 200 words per minute than are those adults whose parents had post high school education. Approximately 11% of young adults in the "no high school" category read less than 100 words per minute on both passages compared with young adults in the "post high school" category with less than 3% on Passage 1 and slightly more than 1% on Passage 2.

At reading rates in excess of 300 words per minute, the "post high school" group's percentage (20%) for Passage 2 is nearly twice the percentage for those young adults in the "graduated high school" group and four times the percentage of the "some high school" group.

For both 17-year-olds and young adults, the percentages who read both passages at less than 100 words per minute increased as

Exhibit 3-5-1

Parental Education Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	3.4	50.6	38.0	8.0
No High School	6.2	63.8	25.1	4.9
*Difference	(2.8)	(13.2)	(-12.8)	(-3.1)
Some High School	4.5	63.3	30.4	1.7
Difference	(1.1)	(12.7)	(-7.5)	(-6.3)
Graduated High School	2.5	51.8	38.7	7.0
Difference	(-0.9)	(1.2)	(0.7)	(-0.9)
Post High School	1.5	40.8	45.1	12.6
Difference	(-2.0)	(-9.7)	(7.1)	(4.6)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	4.2	49.9	34.5	11.4
No High School	7.5	62.1	21.6	8.8
Difference	(3.3)	(12.3)	(-12.9)	(-2.6)
Some High School	7.5	54.8	29.6	8.0
Difference	(3.3)	(5.0)	(-4.9)	(-3.4)
Graduated High School	3.0	52.5	34.5	9.9
Difference	(-1.2)	(2.7)	(0.0)	(-1.5)
Post High School	1.4	42.4	41.0	15.2
Difference	(-2.8)	(-7.5)	(6.5)	(3.8)

*Difference from national percentage.

the educational background of the parents decreased. As exhibit C-3 in appendix C shows, that phenomenon occurred also for 17-year-olds who read within the 100-199 words per minute category. The reverse occurred for 17-year-olds who read within the 200-299

Exhibit 3-5-2

Parental Education Results: Reading Rate
Percentage of Young Adults in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	6.9	51.2	35.0	6.9
No High School	11.2	56.5	28..	4.1
*Difference	(4.3)	(5.3)	(-6.9)	(-2.8)
Some High School	10.6	55.8	31.7	1.9
Difference	(3.7)	(4.6)	(-3.3)	(-4.9)
Graduated High School	2.6	53.9	36.7	6.9
Difference	(-4.4)	(2.7)	(1.6)	(0.0)
Post High School	2.8	37.2	45.0	14.9
Difference	(-4.1)	(-14.0)	(10.0)	(8.1)

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	6.8	52.6	30.2	10.5
No High School	11.8	54.3	26.9	7.0
Difference	(5.0)	(1.7)	(-3.3)	(-3.5)
Some High School	9.3	62.2	23.5	5.0
Difference	(2.5)	(9.6)	(-6.6)	(-5.5)
Graduated High School	3.8	53.8	31.4	10.9
Difference	(-2.9)	(1.2)	(1.2)	(0.5)
Post High School	1.3	41.3	37.6	19.8
Difference	(-5.4)	(-11.3)	(7.4)	(9.3)

*Difference from national percentage.

words per minute category on both passages: the higher the educational background of the parents, the larger the percentage who read both passages within that rate category. Although that pattern did not occur with regularity in the other rate categories

nor for adults in those same categories, the highest percentages reading both passages within the higher rate categories was attained by 17-year-olds and young adults whose parents had a post high school education. For example, only 1% of 17-year-olds whose parents had some high school education and 3% whose parents had no high school education read both passages at 300 or more words per minute in comparison to 4% for 17-year-olds whose parents had graduated high school and 7% whose parents had post high school education. Results were similar for young adults where less than 2% of the young adults whose parents had some or no high school read both passages at 300 or more words per minute, compared to 4% of the young adults whose parents had graduated high school and 8% whose parents had post high school.

Comprehension

On both passages, as the level of parental education increased, the percentage of 17-year-olds and young adults responding correctly to four or more comprehension questions increased (see exhibits 3-5-3 and 3-5-4). For example, 74% of the 17-year-olds in the "post high school" group correctly answered four or more comprehension questions after reading Passage 1 in contrast to only 48% of those in the "no high school" group. For adults on that same passage, the percentage was 82% for the "post high school" group in contrast to 55% for the "no high school" group. For all educational levels comprehension percentages decreased from Passage 1 to Passage 2, although the decrease was not as pronounced for young adults as it was for 17-year-olds (about 50%).

On both passages, as exhibit 3-5-4 illustrates, the percentage of adults responding to four or more comprehension questions correctly was greater in all parental education categories than were the corresponding percentages for 17-year-olds. For example, approximately half of the young adults who had at least one parent who graduated from high school correctly answered more than three questions on the comprehension exercises on Passage 2 in comparison to only 30% of the 17-year-olds from a comparable parental education group on the same materials. This difference, although in the same direction, was not as pronounced for Passage 1.

Although the percentages of young adults who had four or more correct responses to the comprehension questions on both passages were larger than the percentages for 17-year-olds, the percentages of both age groups increased as the parental education increased. For example, as exhibits D-3 and D-4 in appendix D show, 17% of the 17-year-olds whose parents had no high school education correctly answered four or more comprehension questions on both passages, in contrast to 31% of the 17-year-olds whose

Exhibit 3-5-3

Parental Education Results: Comprehension
Percentage of 17-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	33.3	66.7
No High School	51.8	48.2
*Difference	(18.6)	(-18.6)
Some High School	42.2	57.8
Difference	(8.9)	(-8.9)
Graduated High School	33.4	66.6
Difference	(0.1)	(-0.1)
Post High School	25.6	74.4
Difference	(-7.7)	(7.7)

Passage 2

	3 or fewer correct	4 or more correct
National	68.6	31.4
No High School	74.1	25.9
Difference	(5.5)	(-5.5)
Some High School	72.8	27.2
Difference	(4.2)	(-4.2)
Graduated High School	69.9	30.1
Difference	(1.3)	(-1.3)
Post High School	63.9	36.1
Difference	(-4.7)	(4.7)

*Difference from national percentage.

parents had post high school education. Similarly, 26% of the adults whose parents had no high school education correctly answered four or more comprehension questions on both passages while 46% of the adults whose parents had post high school education did so.

Exhibit 3-5-4

Parental Education Results: Comprehension
Percentage of Young Adults in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	31.2	68.8
No High School	45.4	54.6
*Difference	(14.2)	(-14.2)
Some High School	28.3	71.7
Difference	(-2.9)	(2.9)
Graduated High School	26.1	73.9
Difference	(-5.1)	(5.1)
Post High School	18.0	82.0
Difference	(-13.2)	(13.2)

Passage 2

	3 or fewer correct	4 or more correct
National	56.8	43.2
No High School	67.5	32.5
Difference	(10.7)	(-10.7)
Some High School	56.3	43.7
Difference	(-0.5)	(0.5)
Graduated High School	50.7	49.3
Difference	(-6.1)	(6.1)
Post High School	47.3	52.7
Difference	(-9.5)	(9.5)

*Difference from national percentage.

Comprehension within Rate

The results for Passage 1 reveal that as the level of parental education increased the proportion of 17-year-olds reading 100-299 words per minute who correctly answered four or more comprehension questions increased. With the exception of adults in the "graduated from high school" group who read between 200 and 299 words per minute, the percentages of adults in the same two rate categories (100-199 and 200-299) who answered four or more comprehension questions correctly was larger than the percentages for 17-year-olds in each of the comparable parental education categories.

On Passage 2, (see exhibit 3-5-6) 42% of the 17-year-olds in the "post high school" group who read 200-299 words per minute responded correctly to four or more comprehension questions. In comparison, 63% of the young adults in the same parental education group and the same rate category answered four or more comprehension questions correctly. (See exhibit 3-5-8.) In both cases those percentages were larger than the corresponding percentages for the other education groups within that same rate category of 200-299 words per minute.

On the first passage the lowest percentages of 17-year-olds in each category who answered four or more comprehension questions correctly were attained by those whose parents had had no high school education. As exhibit 3-5-5 illustrates, the greatest percentages (as high as 76%) on that passage were attained by 17-year-olds with at least one parent who had education beyond high school. Those extremes were true over all four rate categories except for the less than 100 words per minute category where the "post high school" group ranked second behind the "graduated high school" group in the percentage with four or more correct responses. That pattern was not sustained for 17-year-olds in Passage 2, nor was it evident in Passage 1 for young

Exhibit 3-5-5

Parental Education Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
No High School					
3 or fewer correct	59.2	52.9	45.5	62.1	51.8
4 or more correct	40.8	47.1	54.5	37.9	48.2
Some High School					
3 or fewer correct	47.0	41.2	43.3	46.2	42.2
4 or more correct	53.0	58.8	56.7	53.8	57.8
Graduated High School					
3 or fewer correct	29.1	30.5	34.5	50.7	33.4
4 or more correct	70.9	69.5	65.5	49.3	66.6
Post High School					
3 or fewer correct	34.4	26.2	24.0	28.4	25.6
4 or more correct	65.6	73.8	76.0	71.6	74.4

Exhibit 3-5-6

Parental Education Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
No High School					
3 or fewer correct	59.0	75.6	67.0	94.6	74.1
4 or more correct	41.0	24.4	33.0	5.4	25.9
Some High School					
3 or fewer correct	83.3	71.5	76.2	58.6	72.8
4 or more correct	16.7	28.5	23.8	41.4	27.2
Graduated High School					
3 or fewer correct	74.4	69.4	68.5	76.1	69.9
4 or more correct	25.6	30.6	31.5	23.9	30.1
Post High School					
3 or fewer correct	80.1	68.9	58.2	63.9	63.9
4 or more correct	19.9	31.1	41.8	36.1	36.1

adults. However, a somewhat similar pattern emerged for adults on the second passage. There the "no high school" group again showed the smallest percentages of the population scoring four or more correct on the comprehension exercises while the greatest percentages are found--in exhibit 3-5-8--within the "graduated high school" group who read at rates of between 100 and 199 or in excess of 300 words per minute and within the "post high school" group who read at rates of from 0 to 100 and from 200 to 299 words per minute.

For 17-year-olds who read both passages at less than 100 words per minute, the percentages answering four or more comprehension questions correctly on both passages increased as parental education decreased. At the opposite end of the rate scale, for 17-year-olds who read both passages at 300 or more words per minute, percentages scoring four or more correct on the

Exhibit 3-5-7

Parental Education Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	≤100	100-199	200-299	>300	Total
No High School					
3 or fewer correct	75.6	45.8	33.4	40.3	45.4
4 or more correct	24.4	54.2	66.6	59.7	54.6
Some High School					
3 or fewer correct	32.1	31.0	19.4	74.4	28.3
4 or more correct	67.9	69.0	80.6	25.6	71.7
Graduated High School					
3 or fewer correct	81.9	18.1	27.7	59.4	26.1
4 or more correct	18.1	81.9	72.3	40.6	73.9
Post High School					
3 or fewer correct	39.2	14.9	16.1	27.9	18.0
4 or more correct	60.8	85.1	83.9	72.1	82.0

comprehension exercises on both passages increased as parental education increased. As exhibits C-3 and C-4 reveal, those patterns are not repeated in the other rate categories for 17-year-olds, nor are they evident in any of the categories for young adults. A few patterns seem to emerge, though. For example, for both 17-year-olds and young adults, few people whose parents had no high school education had read both passages at 300 or more words per minute, and less than 1% of them (from both age groups) had acceptable (i.e., four or more right) comprehension scores on both passages. In contrast, 35% of the 17-year-olds and 32% of the adults whose parents had post high school education and who had read both passages at 300 or more words per minute scored four or more right on the comprehension questions on both passages. For other percentages, please refer to exhibits C-3 and C-4 in appendix C.

Exhibit 3-5-8

Parental Education Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
No High School					
3 or fewer correct	94.1	64.9	60.2	70.6	67.5
4 or more correct	5.9	35.1	39.8	29.4	32.5
Some High School					
3 or fewer correct	67.4	56.4	49.3	67.9	56.3
4 or more correct	32.6	43.6	50.7	32.1	43.7
Graduated High School					
3 or fewer correct	55.5	51.9	49.5	46.7	50.7
4 or more correct	44.5	48.1	50.5	53.3	49.3
Post High School					
3 or fewer correct	11.5	54.3	36.6	55.6	47.3
4 or more correct	88.5	45.7	63.4	44.4	52.7

Results by Size of Community

Reading Rate

Exhibit 3-6-1

Size of Community Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	3.4	50.6	38.0	8.0
Big City	5.1	54.2	34.1	6.6
*Difference	(1.7)	(3.6)	(-3.9)	(-1.4)
Big City Fringe	1.1	48.4	42.1	8.4
Difference	(-2.3)	(-2.2)	(4.1)	(0.4)
Medium City	5.3	46.6	39.5	8.7
Difference	(1.8)	(-4.0)	(1.5)	(0.7)
Small Place	3.1	52.1	36.6	8.2
Difference	(-0.3)	(1.6)	(-1.4)	(0.2)

*Difference from national percentage.

Exhibit 3-6-2

Size of Community Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	4.2	49.9	34.5	11.4
Big City	3.2	55.7	32.1	9.0
*Difference	(-1.0)	(5.9)	(-2.4)	(-2.4)
Big City Fringe	1.7	48.3	35.6	14.5
Difference	(-2.6)	(-1.6)	(1.1)	(3.1)
Medium City	7.0	44.8	35.6	12.6
Difference	(2.8)	(-5.1)	(1.1)	(1.2)
Small Place	5.1	50.2	34.6	10.0
Difference	(0.9)	(0.4)	(0.1)	(-1.4)

*Difference from national percentage.

Seventeen-year-olds in big cities have the smallest percentages of the population reading above 200 words per minute when compared with other size of community groups. As exhibits 3-6-1 and 3-6-2 show, the largest percentage of 17-year-olds reading below 100 words per minute occurred in medium cities. The smallest percentage of 17-year-olds reading below 100 words per minute and the largest percentage reading 200 words per minute or more on both passages were found in the suburban fringe groups.

Although big cities contained the largest percentage of adults reading at rates less than 100 words per minute on both passages, adults from small cities had the largest percentage of readers below 200 words per minute on both passages. Moreover, small cities exhibited the smallest percentage of adult readers in the

Exhibit 3-6-3

Size of Community Results: Reading Rate
Percentage of Young Adults in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	6.9	51.2	35.0	6.9
Big City	10.4	48.5	33.9	7.2
*Difference	(3.5)	(-2.7)	(-1.1)	(0.4)
Big City Fringe	5.8	54.2	31.6	8.4
Difference	(-1.1)	(3.0)	(-3.4)	(1.6)
Medium City	5.3	43.4	38.8	12.5
Difference	(-1.7)	(-7.8)	(3.8)	(5.6)
Small Place	6.5	54.0	35.7	3.8
Difference	(-0.5)	(2.8)	(0.6)	(-3.0)

*Difference from national percentage.

above 300 words per minute category on both passages. As can be observed in exhibit 3-6-4, slightly more than 61% of the young adults in small cities read between 100 and 199 words per minute on Passage 2.

Adults from medium cities had the largest percentage of readers above 200 words per minute on both passages and the largest percentage above 300 words per minute on Passage 1. The big city adults' percentage was slightly higher than the percentage for medium city adults on the second passage.

Exhibit 3-6-4

Size of Community Results: Reading Rate
Percentage of Young Adults in Each Rate Category

Passage 2

	Reading Rate			
	≤100	100-199	200-299	≥300
National	6.8	52.6	30.2	10.5
Big City	12.7	40.7	31.5	15.2
*Difference	(5.9)	(-11.9)	(1.3)	(4.7)
Big City Fringe	4.3	48.9	35.5	11.3
Difference	(-2.5)	(-3.7)	(5.3)	(0.9)
Medium City	3.5	48.5	33.4	14.6
Difference	(-3.3)	(-4.1)	(3.2)	(4.1)
Small Place	6.4	61.3	25.9	6.4
Difference	(-0.3)	(8.7)	(-4.2)	(-4.1)

*Difference from national percentage.

Only slight differences in percentages occurred among the four size of community groups who read both passages within the 200-299 words per minute category. As exhibits C-3 and C-4 in appendix C show, percentages for 17-year-olds and for young adults within that 200-299 rate category are relatively similar, although percentages for 17-year-olds generally seem to be slightly larger. Within the 100-199 rate category, big city 17-year-olds had the largest percentage, 44%, but big city adults had the lowest percentage (33%) at that rate on both passages. For adults who read both passages within the 100-199 rate category, the small city group had the largest percentage, 46%. Among 17-year-olds who had read both passages within the same rate category, suburban fringe people had the smallest percentage (1%) reading at less than 100 words per minute and the largest percentage (6%) reading above 300 words per minute. Among young adults, the medium city group had the smallest percentage (3%) reading both passages at less than 100 words per minute and the largest percentage (7%) reading both passages at 300 or more words per minute.

Comprehension

A smaller percentage (64%) of 17-year-olds from small cities responded correctly to four or more of the comprehension exercises on Passage 1 in comparison to 17-year-olds from medium cities

(71%). On Passage 2, as can be observed in exhibit 3-6-5 below, the percentages in each size of community category decreased by slightly more than one half from the percentages for Passage 1. The differences in percentages among all four categories, however, was not especially large on either passage.

Exhibit 3-6-5

Size of Community Results: Comprehension
Percentage of 17-Year-Olds in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	33.3	66.7
Big City	32.8	67.2
*Difference	(-0.5)	(0.5)
Big City Fringe	32.9	67.1
Difference	(-0.4)	(0.4)
Medium City	28.6	71.4
Difference	(-4.7)	(4.7)
Small Place	36.4	63.6
Difference	(3.1)	(-3.1)

Passage 2

	3 or fewer correct	4 or more correct
National	68.6	31.4
Big City	66.3	33.7
Difference	(-2.3)	(2.3)
Big City Fringe	67.1	32.9
Difference	(-1.5)	(1.5)
Medium City	69.0	31.0
Difference	(0.4)	(-0.4)
Small Place	70.8	29.2
Difference	(2.2)	(-2.2)

*Difference from national percentage.

Exhibit 3-6-6

Size of Community Results: Comprehension
Percentage of Young Adults in Each Comprehension Category

Passage 1

	3 or fewer correct	4 or more correct
National	31.2	68.8
Big City	38.6	61.4
*Difference	(7.4)	(-7.4)
Big City Fringe	28.5	71.5
Difference	(-2.8)	(2.8)
Medium City	28.2	71.8
Difference	(-3.0)	(3.0)
Small Place	30.2	69.8
Difference	(-1.0)	(1.0)

Passage 2

	3 or fewer correct	4 or more correct
National	56.8	43.2
Big City	58.9	41.1
Difference	(2.1)	(-2.1)
Big City Fringe	53.4	46.6
Difference	(-3.4)	(3.4)
Medium City	53.6	46.4
Difference	(-3.2)	(3.2)
Small Place	58.5	41.5
Difference	(1.8)	(-1.8)

*Difference from national percentage.

The percentages of young adults correctly responding to four or more of the comprehension questions on Passage 1 were not too different from the percentages for comparable size of community categories for 17-year-olds. However, on Passage 2, the percentages for adults were somewhat higher than for 17-year-olds--by 7 to 15 percentage points.

The largest percentage of young adults scoring four or more correct on Passage 1 came from medium cities (72%) and the smallest percentage from big cities (61%). On Passage 2 the percentage was highest for medium cities and suburban fringes, with big cities and small cities sharing in the lowest percentages with about 41% scoring four or more correct on the comprehension exercises.

Differences in the percentages of the population of different size communities who correctly answered four or more of the comprehension questions on both passages were slightly larger for young adults than they were for 17-year-olds. About 22% of big city and small city 17-year-olds attained acceptable comprehension scores on both passages in comparison to 25% of the suburban fringe and 27% of the medium city groups. In comparison, 33% of big city and 35% of small city adults answered four or more questions correctly on both passages, while 39% of the medium city and 41% of the suburban fringe groups did so.

Among the 17-year-old groups who had acceptable (i.e., four or more correct) comprehension scores on both passages, the largest percentages of all size of community groups read within either the 100-199 rate category or the 200-299 rate category on both passages. The largest percentages of young adults read within the 100-199 words per minute category on both passages. (For other percentages within each of the rate categories for each of the groups, please see exhibits D-3 and D-4 in appendix D.)

Comprehension within Rate

The comprehension within rate data (presented in exhibits 3-6-7, 3-6-8, 3-6-9, and 3-6-10) reveal no consistent patterns. One size of community does not consistently have the largest percentages of 17-year-olds or young adults who responded correctly to four or more of the comprehension exercises and who

read within certain rate categories. As can be seen in those four exhibits, the range of percentages is not as great within the 100-299 words per minute categories as it was for some previously examined categories, such as race or parental education. There are some relatively high percentages--such as the 81% for big city 17-year-olds who read at 300 or more words per minute

Exhibit 3-6-7

Size of Community Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	≤100	100-199	200-299	>300	Total
Big City					
3 or fewer correct	58.0	33.6	30.5	19.0	32.8
4 or more correct	42.0	66.4	69.5	81.0	67.2
Big City Fringe					
3 or fewer correct	38.7	29.8	35.2	38.0	32.9
4 or more correct	61.3	70.2	64.8	62.0	67.1
Medium City					
3 or fewer correct	39.2	30.3	21.5	45.3	28.6
4 or more correct	60.8	69.7	78.5	54.7	71.4
Small Place					
3 or fewer correct	48.7	37.2	33.8	38.2	36.4
4 or more correct	51.3	62.8	66.2	61.8	63.6

on Passage 1. And there are extremely low percentages, though none as low as the less than 1% of the big city 17-year-olds who had acceptable (i.e., four or more) comprehension scores after reading Passage 2 at less than 100 words per minute. One generalization that can be made, however, is that for the most part 17-year-olds had higher percentages comprehending at an acceptable level within most rate categories than did the young adults on Passage 1. The reverse seems to be true on Passage 2 where for the most part the higher percentages with four or more correct within each rate category were made by the adults rather than the 17-year-olds.

Exhibit 3-6-8

Size of Community Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Big City					
3 or fewer correct	100.0	69.6	56.6	68.9	66.3
4 or more correct	0.0	30.4	43.4	31.1	33.7
Big City Fringe					
3 or fewer correct	61.3	71.3	62.1	66.1	67.1
4 or more correct	38.7	28.7	37.9	33.9	32.9
Medium City					
3 or fewer correct	81.8	68.0	65.4	75.6	69.0
4 or more correct	18.2	32.0	34.6	24.4	31.0
Small Place					
3 or fewer correct	79.0	70.5	70.9	68.0	70.8
4 or more correct	21.0	29.5	29.1	32.0	29.2

In addition, 79% of 17-year-olds from the medium city (larger than any other size of community group) who read 200-299 words per minute on Passage 1 responded correctly to four or more of the comprehension questions. A smaller percentage (65%) of young adults from the big city (smaller than any other size of community group) who read 200-299 words per minute responded correctly to four or more of the comprehension questions on Passage 1.

The highest percentages with four or more correct responses within the 200-299 words per minute category for adults were made on both passages by people from the medium city areas. The lowest percentages in that same rate category were made by people in big cities.

As exhibits C-3 and C-4 in appendix C illustrate, clear patterns do not emerge in an examination of the percentages of

Exhibit 3-6-9

Size of Community Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Big City					
3 or fewer correct	63.7	35.2	34.3	44.8	38.6
4 or more correct	36.3	64.8	65.7	55.2	61.4
Pig City Fringe					
3 or fewer correct	32.9	30.1	22.6	36.6	28.5
4 or more correct	67.1	69 9	77.4	63.4	71.5
Medium City					
3 or fewer correct	70.	27.9	21.0	33.9	28.2
4 or more correct	29.9	72.1	79.0	66.1	71.8
Small Place					
3 or fewer correct	66 4	27.7	25.0	53.4	30.2
4 or more correct	33.6	72.3	75.0	46.6	69.8

the populations from various size of community groups who scored four or more right answers on the comprehension exercises on both passages and who read both passages within the same rate category. Percentages of 17-year-olds who had acceptable comprehension scores among the four size of community groups who had read both passages within the 100-199 rate category were similar, ranging from 19% to 23%. But within the 200-299 rate category, 21% of small city 17-year-olds and 44% of big city 17-year-olds had acceptable comprehension scores on both passages, representing the lowest and the highest percentages within that rate category. However, 33% of the small city 17-year-olds who had read both passages at 300 or more words per minute scored four or more correct on the comprehension exercises on both passages for the second largest percentage within that highest rate category. Th 17-year-olds from the big city group had the largest percentage (40%) scoring four or more correct within the 300 or more words per minute category on both passages. At the other end of the rate scale, less than 1% of the 17-year-olds from the big city group who had read at less than 100 words per minute scored four

Exhibit 3-6-10

Size of Community Results: Comprehension Within Rate
Percentage of Young Adults in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	≤100	100-199	200-299	≥300	Total
Big City					
3 or fewer correct	71.5	62.4	55.2	46.8	58.9
4 or more correct	28.5	37.6	44.8	53.2	41.1
Big City Fringe					
3 or fewer correct	73.5	48.8	51.8	70.6	53.4
4 or more correct	26.5	51.2	48.2	29.4	46.6
Medium City					
3 or fewer correct	68.7	54.1	45.8	66.3	53.6
4 or more correct	31.3	45.9	54.2	33.7	46.4
Small Place					
3 or fewer correct	83.9	61.2	47.8	51.2	58.5
4 or more correct	16.1	38.8	52.2	48.8	41.5

or more right on both passages, in comparison with 4% of medium city 17-year-olds who did so.

With adults, however, 24% of those from the big city group who had read both passages at less than 100 words per minute answered four or more of the comprehension questions correctly on both passages. That was the largest percentage having good comprehension scores on both passages within that lowest rate category. The suburban fringe group had the largest percentage (44%) within the 100-199 rate category; the medium city adults had the largest percentage (51%) within the 200-299 rate category; and the big city adults again had the largest percentage (32%) who had scored four or more correct within the 300 or more words per minute category on both passages.

Results by Size-and-Type of Community
17-Year-Olds Only

Reading Rate

When the reading rate of only 17-year-olds who are in school was examined according to size-and-type of community, the following results were obtained. On both passages, fewer students from the "extreme rural" and "extreme inner city" groups (35% and 25% on Passage 1 and 38% and 32% on Passage 2) read at rates greater than 200 words per minute than did students from other

Exhibit 3-7-1

Size-and-Type of Community Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

Passage 1

	Reading Rate			
	<100	100-199	200-299	>300
National	2.9	50.5	38.4	8.2
Extreme Rural	3.6	61.4	30.7	4.2
*Difference	(0.7)	(11.0)	(-7.7)	(-4.0)
Extreme Inner City	6.6	68.1	21.8	3.5
Difference	(3.7)	(17.6)	(-16.5)	(-4.7)
Extreme Affluent Suburb	1.1	43.6	43.3	12.0
Difference	(-1.8)	(-6.9)	(4.9)	(3.8)
Rest of Big City	3.0	50.2	40.4	6.4
Difference	(0.0)	(-0.3)	(2.0)	(-1.8)
Suburban Fringe	1.5	50.3	41.4	6.8
Difference	(-1.4)	(-0.2)	(3.0)	(-1.5)
Medium City	4.3	45.4	40.3	10.0
Difference	(1.4)	(-5.0)	(1.9)	(1.8)
Small City	2.6	48.6	39.4	9.5
Difference	(-0.4)	(-1.9)	(1.0)	(1.3)

*Difference from national percentage.

STOC categories. Approximately 75% of 17-year-olds in the "extreme inner city" group read at rates below 200 words per minute. The percentage of 17-year-olds from the "affluent suburb"

group reading in excess of 200 words per minute on Passage 1 was more than twice the percentage for the "extreme inner city" readers. The difference decreased for Passage 2 where the percentage for "affluent suburb" 17-year-olds decreased and the percentage for "inner city" increased somewhat.

Exhibit 3-7-2

Size-and-Type of Community Results: Reading Rate
Percentage of 17-Year-Olds in Each Rate Category

Passage 2

	Reading Rate			
	<100	100-199	200-299	>300
National	3.6	49.9	35.0	11.4
Extreme Rural	4.2	57.2	30.2	8.3
*Difference	(0.6)	(7.3)	(-4.8)	(-3.1)
Extreme Inner City	7.3	60.8	26.9	5.0
Difference	(3.7)	(10.9)	(-8.1)	(-6.4)
Extreme Affluent Suburb	0.0	48.4	39.9	11.7
Difference	(-3.6)	(-1.6)	(4.9)	(0.3)
Rest of Big City	1.1	51.3	38.2	9.4
Difference	(-2.6)	(1.4)	(3.2)	(-2.0)
Suburban Fringe	2.3	49.5	33.0	15.1
Difference	(-1.3)	(-0.4)	(-2.0)	(3.7)
Medium City	6.0	44.1	36.4	13.5
Difference	(2.4)	(-5.8)	(1.4)	(2.1)
Small City	4.4	48.7	35.9	11.1
Difference	(0.7)	(-1.3)	(0.9)	(-0.4)

*Difference from national percentage.

As exhibit 3-7-1 shows, percentages for the 200-299 words per minute category were quite similar on Passage 1 for "rest of big city," "suburban fringe," "medium city," and "small city" groups. "Inner city" and "medium city" groups contained the largest percentages of 17-year-olds reading below 100 words per minute on both passages.

The "affluent suburb" group contained the largest percentage of readers above 200 words per minute on both passages and the largest above 300 words per minute on Passage 1; but on Passage 2 17-year-olds from the "suburban fringe" and "medium city" groups

had the largest percentages in the above 300 words per minute rate category.

Except for "rural" and "inner city" 17-year-olds, between 23% and 27% of the 17-year-olds in the other five STOC groups read both passages between 200 and 299 words per minute, as exhibit C-3 in appendix C shows. Only 13% of the "inner city" group and 18% of the "extreme rural" group read within the 200-299 rate category. However, the "inner city" and "rural" groups had the largest percentages of any of the STOC groups who read both passages within the 100-199 words per minute category: 48% of the "rural" 17-year-olds and 53% of the "inner city" 17-year-olds read both passages within that rate category. The "inner city" group had the largest percentage (5%) reading both passages at less than 100 words per minute and the smallest (less than 1%) reading both passages at 300 or more words per minute. In contrast, 7% of "affluent suburb" 17-year-olds read both passages at 300 or more words per minute.

Comprehension

On Passage 1, 51% (the smallest percentage) of the 17-year-olds from the "extreme inner city" group and 77% (the largest percentage) from the "extreme affluent suburb" group responded correctly to four or more of the comprehension questions. On Passage 2, the largest percentage (43%) of 17-year-olds who had acceptable (i.e., four or more correct responses) comprehension scores occurred in the "extreme affluent suburb" group. In contrast, as exhibit 3-7-3 reveals, only 28% of the "inner city" 17-year-olds met the criteria for acceptable comprehension on that passage.

Between Passage 1 and Passage 2, comprehension percentages for all STOC groups decreased by about half. The largest decrease occurred in the "suburban fringe" and "medium city" groups; the smallest percentage having four or more correct responses on either passage, however, was made by the "extreme inner city" group.

"Rural," "inner city," "suburban fringe," and "small city" groups of 17-year-olds had the smallest percentages--between 21% and 23%--among the seven size-and-type of community groups who responded correctly to four or more comprehension questions on both passages. In contrast, 37% of the in-school 17-year-olds from the "affluent suburb" group scored four or more right on both passages--the largest percentage recorded for any of the subgroups of 17-year-olds on the comprehension exercises on both passages. Very small percentages of any of those groups read both passages at less than 100 words per minute; in fact, as exhibit D-3 in appendix D clearly shows, only three groups:

Exhibit 3-7-3

Size-and-Type of Community Results: Comprehension
Percentage of 17-Year-Olds in Each Comprehension Category

	Passage 1	
	3 or fewer correct	4 of more correct
National	33.1	66.9
Extreme Rural	37.7	62.3
*Difference	(4.6)	(-4.6)
Extreme Inner City	49.5	50.5
Difference	(16.3)	(-16.3)
Extreme Affluent Suburb	23.0	77.0
Difference	(-10.1)	(10.1)
Rest of Big City	29.6	70.4
Difference	(-3.5)	(3.5)
Suburban Fringe	32.8	67.2
Difference	(-0.3)	(0.3)
Medium City	29.0	71.0
Difference	(-4.2)	(4.2)
Small City	35.8	64.2
Difference	(2.7)	(-2.7)

	Passage 2	
	3 or fewer correct	4 or more correct
National	67.9	32.1
Extreme Rural	69.0	31.0
Difference	(1.1)	(-1.1)
Extreme Inner City	72.1	27.9
Difference	(4.1)	(-4.1)
Extreme Affluent Suburb	57.5	42.5
Difference	(-10.4)	(10.4)
Rest of Big City	64.6	35.4
Difference	(-3.4)	(3.4)
Suburban Fringe	70.1	29.9
Difference	(2.2)	(-2.2)
Medium City	68.9	31.1
Difference	(1.0)	(-1.0)
Small City	70.4	29.6
Difference	(2.5)	(-2.5)

*Difference from national percentage.

"rural," "suburban fringe," and "small city" had more than 1% who read both passages at less than 100 words per minute. In contrast, 7% of the "affluent suburb" group and 9% of the "small city" groups who scored four or more on the comprehension exercises on both passages read both passages at 300 or more words per minute. (For other percentages within all four rate categories, please see exhibit D-3 in appendix D.)

Comprehension within Rate

Exhibits 3-7-4 and 3-7-5 record the percentages of in-school 17-year-olds from seven size-and-types of communities who correctly responded to four or more comprehension questions after reading within one of the four rate categories. The "extreme affluent suburb" group not only had one of the narrowest ranges of percentages across rate categories but also had consistently high percentages with four or more correct on both passages.

Exhibit 3-7-4

Size-and-Type of Community Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 1

	Reading Rate				
	<100	100-199	200-299	>300	Total
Extreme Rural					
3 or fewer correct	51.6	32.5	45.6	43.7	37.7
4 or more correct	48.4	67.5	54.4	56.3	62.3
Extreme Inner City					
3 or fewer correct	67.8	52.1	39.7	25.9	49.5
4 or more correct	32.2	47.9	60.3	74.1	50.5
Extreme Affluent Suburb					
3 or fewer correct	24.7	23.6	21.7	25.4	23.0
4 or more correct	75.3	76.4	78.3	74.6	77.0
Rest of Big City					
3 or fewer correct	42.1	21.5	37.9	35.7	29.6
4 or more correct	57.9	78.5	62.1	64.3	70.4
Suburban Fringe					
3 or fewer correct	35.9	29.9	35.9	34.8	32.8
4 or more correct	64.1	70.1	64.1	65.2	67.2
Medium City					
3 or fewer correct	53.2	29.8	21.2	46.0	29.0
4 or more correct	46.8	70.2	78.8	54.0	71.0
Small City					
3 or fewer correct	37.0	38.9	31.5	37.1	35.8
4 or more correct	63.0	61.1	68.5	62.9	64.2

Exhibit 3-7-5

Size-and-Type of Community Results: Comprehension Within Rate
Percentage of 17-Year-Olds in Each Comprehension Within Rate Category

Passage 2

	Reading Rate				
	<100	100-199	200-299	>300	Total
Extreme Rural					
3 or fewer correct	81.3	65.3	72.5	75.9	69.0
4 or more correct	18.7	34.7	27.5	24.1	31.0
Extreme Inner City					
3 or fewer correct	100.0	75.3	59.4	59.9	72.1
4 or more correct	0.0	24.7	40.6	40.1	27.9
Extreme Affluent Suburb					
3 or fewer correct	0.0	63.1	52.1	53.2	57.5
4 or more correct	0.0	36.9	47.9	46.8	42.5
Rest of Big City					
3 or fewer correct	100.0	64.7	57.4	88.5	64.6
4 or more correct	0.0	35.3	42.6	11.5	35.4
Suburban Fringe					
3 or fewer correct	60.1	72.9	68.4	66.5	70.1
4 or more correct	39.9	27.1	31.6	33.5	29.9
Medium City					
3 or fewer correct	75.4	69.0	65.6	74.8	68.9
4 or more correct	24.6	31.0	34.4	25.2	31.1
Small City					
3 or fewer correct	83.5	71.6	68.7	65.9	70.4
4 or more correct	16.5	28.4	31.3	34.1	29.6

That group ranked highest in the percentage of 17-year-olds who made a score of four or more on the comprehension exercises on Passage 1 and who read within the two extreme rate categories; their percentages within the 100-299 words per minute categories ranked second on Passage 1. On Passage 2, percentages with "four or more correct" for that group ranked first in all rate categories except the less than 100 words per minute category where no members of that group had been recorded at that rate.

The "extreme inner city" group of 17-year-olds had the lowest percentages of "4 or more correct" within the 0-199 words per minute categories on both passages (less than 1% within the <100 words per minute category answering more than three comprehension questions correctly on Passage 1), while the "extreme rural" group had the smallest percentage of any STOC group in the 200-299 words per minute category.

Results for the "rest of big city" group on Passage 2 were rather untypical, as exhibit 3-7-5 illustrates. Less than 1% of their group who had read at less than 100 words per minute scored four or more on the comprehension exericses, and only 12% who read in excess of 300 words per minute had an acceptable comprehension score. However, the percentages having "4 or more correct" within the 100-199 and 200-299 words per minute categories were the second largest of the seven STOC groups identified.

For those few 17-year-olds in each STOC category who read both passages at less than 100 words per minute, comprehension generally was not good when judged in terms of four or more correct answers to the comprehension exercises on both passages. Less than 1% of the 17-year-olds from "inner city," "rest of big city," and "medium city" groups who had read within the lowest rate category answered four or more questions correctly on both passages. In comparison, however, 14% of the "rural," 26% of the "suburban fringe," and 40% of the "small city" groups who had read less than 100 words per minute had good comprehension scores on both passages.

Percentages of STOC groups having acceptable comprehension scores within the 100-199 rate category ranged from a low of 16% for the "inner city" group to a high of 28% for both the "affluent suburb" and the "rest of big city" groups. For those who had read both passages within the 200-299 words per minute category, percentages having scored four or more on the comprehension exercises on both passages ranged from a low of 21% for the "small city" group to a high of 56% for the "affluent suburb" group. Other percentages can be noted in exhibit C-3 in appendix C.

CHAPTER 4

EXCEPTIONALLY FAST READERS

An "exceptionally fast reader" was defined as anyone who read either of the two passages faster than 750 words per minute. Out of the 7,850 readers in this study only 17 respondents qualified as exceptionally fast readers. Of those, only two readers at any age level exceeded 750 words per minute on the first passage. Both of those readers were 17-year-olds, and both decreased their rate on the second passage.

In contrast, in all other cases and at all age levels, reading rate increased from Passage 1 to Passage 2. For all age levels, Passage 2 was more difficult both in structure and in content, yet rates increased. There is, therefore, no evidence to suggest that these fast readers were flexible readers. This group does not differ in that respect from the total population of readers discussed in the previous pages, since at all four age levels in the study the percentage of readers who exceeded 300 words per minute increased from Passage 1 to Passage 2.

The 17-year-old group contained the greatest number of rapid readers: seven.[1] The 13-year-old group contained the least: only one. More than half of the exceptionally fast readers came from the West; the next largest group was from the Central region, with the Southeast having only one. There were almost twice as many males (11) as females (6) and three times as many Whites (13) as Blacks (4). However, there were 6,460 Whites in the sample and only 1,233 Blacks; therefore, the percentage of Black fast readers was greater than the percentage of White fast readers.

The homes of all of the rapid readers received a newspaper regularly, and most of them received magazines. The majority of the homes also contained an encyclopedia and 25 or more books. (See exhibit 4-1.)

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[1]The sample sizes were: 2,195 9-year-olds; 2,196 13-year-olds; 2,220 17-year-olds; and 1,239 young adults.

Only one of the 17 rapid readers came from a home where neither parent had completed the eighth grade. All but three of the readers came from homes where at least one of the parents had some high school education or more. Only three of the rapid readers, however, had a parent with education beyond high school. (See exhibit 4-1.)

Only five of the 17 extremely fast readers exceeded 900 words per minute while reading the second passage. Of those, one did not respond to the comprehension exercises, one got none correct, one had three correct, and the remaining two had four out of the five correct. In the 15 instances where rates increased for the second passage, comprehension increased for five people, remained the same for four, and decreased for six. For the two 17-year-olds whose rate decreased from Passage 1 to Passage 2, one read the first passage at nearly 1,000 words per minute with a perfect comprehension score but slowed to only 322 words per minute on the more difficult second passage and got only one correct on the comprehension exercises; the other started out at more than 1,000 words per minute with only two correct responses then slowed to 447 words per minute on Passage 2 and answered all five comprehension questions correctly.

Two 9-year-olds read in excess of 1,000 words per minute; no 13-year-old did (although the one fast reader at that age attained 991 words per minute); one 17-year-old exceeded 1,000 words per minute on Passage 1 while two exceeded 1,000 on Passage 2; no young adult read any faster than 859 words per minute on either passage.

If, in addition to a reading rate in excess of 750 words per minute, the criteria for an extremely fast reader had been a comprehension score of four or more correct, only one 9-year-old, one 13-year-old, one 17-year-old, and two young adults would have qualified on one of the passages. No one in the entire study would have met those criteria for both passages. Thus, rapid readers with consistently good comprehension scores were nowhere in evidence in this study.

Exhibit 4-1

Exceptionally Fast Readers

Category	9-year-olds	13-year-olds	17-year-olds	young adults
NATIONAL	5	1	7	4
REGION				
Northeast	1	0	1	0
Southeast	0	0	1	0
Central	1	0	2	2
West	3	1	3	2
SEX				
Male	2 (W 1, B 1)	0	5	4
Female	3 (W 2, B 1)	1	2	0
RACE				
White	3	1	7	2
Black	2	0	0	2
FATHER'S EDUCATION				
<8th Grade	0	0	1	1
8th Grade	0	0	0	1
Some High School	0	0	1	2
Graduated High School	1	1	3	0
Post High School	0	0	2	0
Unknown	4	0	0	0
MOTHER'S EDUCATION				
<8th Grade	0	0	0	0
8th Grade	0	0	1	0
Some High School	1	0	4	1
Graduated High School	2	0	1	2
Post High School	0	1	1	0
Unknown	2	0	0	1
OWN EDUCATION				
Some High School				1
Graduated High School				2
Post High School				1
READING MATERIALS				
Newspaper	5	1	7	4
Magazines	3	1	5	4
25 or more books	2	1	6	4
Encyclopedia	1	1	5	4
3 or more	1	1	6	4

CHAPTER 5

SLOW READERS

A "slow reader" was defined as anyone who read either of the two passages at 50 words per minute or slower. Among the sample of 2,195 9-year-olds, 111 qualified as slow readers; there were also 20 slow readers among the 21,196 13-year-olds, 7 among the 2,220 17-year-olds, and 11 among the 1,239 young adults.

The number of slow readers was quite evenly distributed throughout the four regions of the country among the sample of 9-year-olds and 13-year-olds. There were, however, no slow readers among the 17-year-olds from the Central region; but that region had the largest number of slow readers among the young adult population. (See exhibit 4-2.)

There were more males than females within each age group, which seems to fit the stereotype of males being slower readers than females. (See exhibit 4-2.)

There were 76 White slow readers and 35 Black slow readers among 9-year-olds; 13 Whites and 7 Blacks among the 13-year-olds; 2 Whites and 5 Blacks among the 17-year-olds; and 2 Whites, 7 Blacks and 2 "Others" among the young adult slow readers. (See exhibit 4-2.)

It is difficult to tell if parental education is related to whether a 9-year-old or a 13-year-old is a slow reader, since most 9-year-olds and about half of the 13-year-olds didn't know the educational background of their parents. No pattern emerged in educational background of the parents of 17-year-old slow readers. A pattern of educational background did emerge for young adult slow readers, however. Of the 11 adult slow readers, 8 of their fathers and 8 of their mothers had less than an eighth grade education. In addition, only 3 of the 11 adult slow readers had graduated from high school; 7 of them had only some high school education. (See exhibit 4-2.)

The homes of more than half of the 9-year-old slow readers contained a newspaper, magazines, 25 or more books, and an encyclopedia. About two thirds of the homes of the 13-year-olds contained a newspaper, 25 or more books, and an encyclopedia,

although only about one third of the students reported magazines in their homes. Almost all of the 17-year-old slow readers had a newspaper and 25 or more books in their homes, but only 3 of the 7 reported magazines and an encyclopedia. Among young adults, only 6 out of the 11 slow readers reported a newspaper in their home; 7 reported having 25 or more books; 3 reported magazines; and 4 reported an encyclopedia. Only 3 of the adults indicated having any 3 or more of those. (See exhibit 4-2.)

Comprehension: 9-year-olds

Eleven of the 111 9-year-old slow readers did not respond to the comprehension questions on Passage 1. Of those who responded to the five comprehension questions on the first passage, 8 of them scored zero. On the other hand, 55 of the students correctly answered four or more of the questions on Passage 1, and 37 of those had all five correct.

Twenty of the slow readers did not read Passage 2; they and 20 more did not answer the comprehension questions on the second passage. Of the 11 who had not responded to the comprehension questions on Passage 1, none responded to the comprehension questions on Passage 2, although 3 of them did read the second passage. Of those who responded to the comprehension questions on Passage 2, 15 scored zero. On the other hand, 8 of them answered four or more correctly (only 1 had all five correct). Eight students also had four or more correct responses to the comprehension questions on both passages.

Although the second passage was more difficult to read than the first passage, 54 of the 9-year-olds read it faster than they had read the first passage. Comprehension scores on the second passage remained the same as on the first passage or decreased for all but 5 of the 9-year-old slow readers.

Comprehension: 13-year-olds

All of the 20 slow readers among the 13-year-olds attempted to answer the comprehension questions on Passage 1, although 8 of them got none correct. Two 13-year-olds did not read the second passage; they and a third student did not answer the comprehension questions on the second passage. Of those who responded to the comprehension questions on the second passage, 3 failed to get any right. Of the 8 who were unable to answer any of the five comprehension questions on Passage 1, 2 tried and failed to answer the comprehension questions on Passage 2, 2 did not read Passage 2, and 1 read the passage but did not respond to the comprehension exercises.

Twelve of the 18 students who read the second passage read it faster than they had read the first passage. Comprehension

scores on Passage 2, however, either remained the same or decreased for 12 of the 20 13-year-olds. Only 1 student had four or more correct responses on Passage 1; 3 had four or more correct on Passage 2. One 13-year-old slow reader answered four or more correctly on both passages.

Comprehension: 17-year-olds

All of the 7 slow readers among the 17-year-olds read the first passage and attempted to answer the five comprehension questions which followed. Three of them did not respond to the comprehension questions on the second passage. All of those who attempted the comprehension questions on either passage got at least one correct. Only 1 17-year-old had four or more correct answers on Passage 1, and only 1 had four or more right on Passage 2. No 17-year-old slow reader had four or more correct responses on both passages.

All 17-year-old slow readers--in contrast to 9-year-olds and 13-year-olds--read the second passage at a slower rate than they had read the first passage. Comprehension remained the same or decreased from Passage 1 to Passage 2 for all but 2 of the 17-year-olds.

Comprehension: young adults

All of the slow reading adults read Passage 1 and attempted to answer the comprehension questions which followed. Two of them got none of the comprehension exercises correct on the first passage. Neither of those 2 read the second passage or answered the comprehension questions which followed. Two adults did not read Passage 2. They and 4 others also did not respond to the comprehension questions on the second passage, making a total of 8 adults (out of 11 slow readers) who did not answer the comprehension questions on Passage 2.

Three young adult slow readers scored four or more right on the comprehension exercises on Passage 1; only 1 person had four or more right on Passage 2. No one answered four or more correctly on both passages.

All but one of the adults read Passage 2 slower than they had read Passage 1. Comprehension for all but one of the adult slow readers either remained the same or decreased from Passage 1 to Passage 2.

Exhibit 4-2

Slow Readers

Category	9-year-olds	13-year-olds	17-year-olds	young adults
NATIONAL	111	20	7	11
REGION				
Northeast	29	5	2	1
Southeast	28	6	3	2
Central	27	4	0	7
West	27	5	2	1
SEX				
Male	70 W 48 B 22	17 W 10 B 7	5 W 1 B 4	7 W 2 B 4
Female	41 W 28 B 13	3 W 3 B 0	2 W 1 B 1	4 W 0 B 3
RACE				
White	76	13	2	2
Black	35	7	5	7
Other				?
FATHER'S EDUCATION				
<8th Grade	3	2	2	8
8th Grade	5	1	0	1
Some High School	5	3	1	0
Graduated High School	13	1	0	0
Post High School	10	1	1	0
Unknown	75	12	3	2
MOTHER'S EDUCATION				
<8th Grade	5	3	1	8
8th Grade	0	2	0	1
Some High School	4	2	0	1
Graduated High School	19	3	2	0
Post High School	12	1	1	0
Unknown	71	9	3	1
OWN EDUCATION				
Some High School				7
Graduated High School				3
Post High School				0
Not reported				1
READING MATERIALS				
Newspaper	69	13	6	6
Magazines	71	7	3	3
25 or more books	75	15	7	7
Encyclopedia	69	14	3	4
3 or more	64	11	5	3

APPENDIX A

READABILITY OF READING RATE PASSAGES

Readability formulae were devised to measure the approximate grade level at which a book could be read with understanding by a reader of average intelligence and reading ability. Although much work has gone into the creation of such formulae, no one formula can claim to be definitive.

Perhaps the main difficulty in constructing a definitive formula is the near impossibility of accurately measuring such elements of writing as metaphoric language, concept difficulty, concept density, and interest-level. Most readability formulae, therefore, have been confined to measuring sentence length and vocabulary difficulty. Sentence length is simple enough to measure; vocabulary is a bit more complicated. One readability formula uses the number of prepositional phrases in a sample passage; some use the number of words of three or more syllables; others use the number of words not found on a well-known list of 3,000 basic words. In addition to those factors, each formula contains its special instructions about which words to count and which not to count, which to count only once in a sample and which to count more than once.

The reader will note on the following page that each formula requires the investigator to add or multiply various numbers by some odd-looking figures such as 0.086 or 0.839. Those figures were arrived at through statistical manipulations based on a number of factors which are understandable to statisticians and researchers, though to very few others. Partly because of those statistical computations, certain readability formulae are more applicable and more reliable with materials for elementary readers; others seem to work better with higher level materials. Some formulae are applicable at all levels. The following chart of grade-level equivalents for each passage reflects the use of different formulae on passages at different grade levels.

These formulae, then, are statistical devices for estimating the relative reading difficulty of materials, based primarily on sentence length and vocabulary difficulty. They are far from fool-proof, but they do give some useful indication of the relative difficulty of one passage compared to another. The use of

multiple formulae on each passage gives an added indication of the approximate grade-level parameters within which the passage falls.

READABILITY
FORMULAE

Spache:

1) Choose several samples of at least 100 words each, spaced evenly throughout the passage.
2) Determine the average number of words per sentence; multiply that number by 0.141.
3) Count the number of words not on the Dale list of 769 easy words; multiply that number by 0.086.
4) Add those two sums plus 0.839 to find the grade placement of the passage.

Lorge:

1) Choose several samples of at least 100 words each, spaced evenly throughout the passage.
2) Determine the average number of words per sentence; multiply that number by 0.07.
3) Count the number of prepositional phrases; multiply that number by 0.1301.
4) Count the number of words not on the Dale list of 769 easy words; multiply that number by 0.1073.
5) Add those three products, plus 1.6126 to find the grade placement of the passage.

Fog:

1) Choose several samples of at least 100 words each, spaced evenly throughout the passage.
2) Determine the average number of words per sentence.
3) Count the number of words of three or more syllables.
4) Total the two factors noted above and multiply that number by 0.4 to find the grade placement of the passage.

SMOG:

1) Count 10 consecutive sentences near the beginning of the passage, 10 near the middle, and 10 near the end.
2) Count the number of words of three or more syllables.
3) Estimate the square root of the number of polysyllabic words counted (estimate to the nearest perfect square).
4) Add 3 to the approximate square root to find the grade placement of the passage.

Dale-Chall:

1) Choose several samples of at least 100 words each, spaced evenly throughout the passage.
2) Determine the average number of words per sentence; multiply that number by 0.0496.

3) Count the number of words not on the Dale list of 3,000 familiar words.
4) Divide the number of words not on the Dale list by the total number of words in the sample; multiply that number by 0.1579.
5) Total the factors determined in steps 2 and 4; add 3.6365 to that sum to arrive at a formula raw score.
6) Convert the raw score to a corrected grade-level score by using the table provided with the formula.

READABILITY INDICES

FOR READING RATE PASSAGES

reported as approximate grade-level equivalents

	formulae				
passage	Spache	Lorge	Fog	SMOG	Dale-Chall
9-Year-Olds:					
1. "Elmer and the Dragon"	upper 4th	mid 6th	high 6th	low 8th	
2. "Armadillo"	mid 7th	mid 11th	high 12th	mid 11th	
13-Year-Olds:					
1. "An Expensive Experiment"			upper 5th	mid 5th	mid 5th
2. "Physical Geology"			mid 11th	low 11th	upper 10th
17-Year-Olds & Young Adults:					
1. "How to Bug a Mosquito"			mid 10th	low 10th	upper 10th
2. "The Social Order"			beyond college	begin-ning college	upper college

Blank spaces indicate that a particular formula was not appropriate for that level of material.

APPENDIX B

COMPREHENSION EXERCISES

In the pages which follow, the reader will find a copy of each comprehension question used in the study. There are five questions for each passage, two passages for each age group, with 17-year-olds and young adults responding to the same passages and comprehension questions.

The estimated percentage of the population responding to each choice is noted to the right of each foil for a particular question. In addition the percentages who responded "I don't know" or who did not respond at all are also noted.

Beneath those responses are listed--by categories of region, sex, race, etc.--the percentages of the population who answered that question correctly, and the differences of those percentages from the national percentage. Because those numbers are estimated percentages of the population who selected the correct foil, and because of errors due to rounding numbers to the nearest tenth of a percent, the sum of the percentage correct and the difference from the national percentage may not exactly equal the national percentage.

9-Year-Olds
Passage 1
Comprehension Exercises

1. The island in the story is called

4.1	○	Bananaland.
3.1	○	Orangania.
80.8	●	Tangerina.
6.2	○	Watermelon Island.
4.0	○	I don't know.
1.9		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	80.8	
REGION		
Northeast	84.0	3.2
Southeast	76.0	-4.8
Central	79.9	-.9
West	82.8	2.0
SEX		
Male	77.2	-3.5*
Female	84.5	3.7
RACE		
White	84.4	3.6
Black	60.0	-20.7
PARENTAL EDUCATION		
No High School Education	67.0	-13.7
Some High School Education	75.5	-5.3
Graduated from High School	82.0	1.3
Post High School Education	85.9	5.1
SIZE-AND-TYPE OF COMMUNITY		
Rural	73.5	-7.3
Inner City	70.2	-10.6
Affluent Suburb	88.2	7.4
Rest of Big City	86.9	6.1
Suburban Fringe	80.5	-.3
Medium City	78.7	-2.1
Small City	81.8	1.0

*Because of rounding errors, the sum of the percentage correct and the difference from the national percentage may not exactly equal the national percentage.

2. The dragon discovered that he liked to eat

3.1	○	driftwood.
2.2	○	sandwiches.
3.7	○	corn on the cob.
84.1	●	tangerine peels.
5.0	○	I don't know.
1.9		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	84.1	
REGION		
Northeast	87.0	2.9
Southeast	78.0	-6.1
Central	86.6	2.5
West	83.1	-1.0
SEX		
Male	80.8	-3.3
Female	87.6	3.5
RACE		
White	88.1	4.0
Black	61.8	-22.3
PARENTAL EDUCATION		
No High School Education	76.8	-7.3
Some High School Education	75.8	-8.3
Graduated from High School	85.7	1.6
Post High School Education	89.8	5.7
SIZE-AND-TYPE OF COMMUNITY		
Rural	79.9	-4.2
Inner City	68.8	-15.3
Affluent Suburb	90.8	6.7
Rest of Big City	87.6	3.5
Suburban Fringe	86.5	2.4
Medium City	83.3	-.8
Small City	84.1	.1

3. In the story, the boy eats a lot of

10.5	○	apples.
75.2	●	tangerines.
6.3	○	skunk cabbages.
2.1	○	corn on the cob.
4.0	○	I don't know.
1.9		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	75.2	
REGION		
Northeast	77.7	2.5
Southeast	68.9	-6.3
Central	76.8	1.6
West	76.2	1.0
SEX		
Male	72.7	-2.5
Female	77.9	2.7
RACE		
White	79.8	4.6
Black	46.8	-28.5
PARENTAL EDUCATION		
No High School Education	49.3	-25.9
Some High School Education	64.0	-11.3
Graduated from High School	79.7	4.5
Post High School Education	84.5	9.3
SIZE-AND-TYPE OF COMMUNITY		
Rural	74.7	-.5
Inner City	57.5	-17.7
Affluent Suburb	83.8	8.6
Rest of Big City	77.9	2.7
Suburban Fringe	77.8	2.6
Medium City	72.3	-2.9
Small City	75.4	.2

4. Who does the boy ask to find out which way his home is?

73.3	●	A seagull
7.0	○	An alley cat
8.6	○	An old sailor
1.6	○	A passing fish
7.7	○	I don't know.
1.9		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	73.3	
REGION		
Northeast	79.4	6.2
Southeast	66.4	-6.9
Central	72.9	-.4
West	73.0	-.3
SEX		
Male	71.6	-1.7
Female	75.0	1.7
RACE		
White	77.3	4.0
Black	50.3	-23.0
PARENTAL EDUCATION		
No High School Education	58.5	-14.8
Some High School Education	58.7	-14.6
Graduated from High School	74.8	1.6
Post High School Education	82.1	8.8
SIZE-AND-TYPE OF COMMUNITY		
Rural	64.7	-8.5
Inner-City	53.9	-19.4
Affluent Suburb	85.8	12.5
Rest of Big City	74.2	.9
Suburban Fringe	77.0	3.8
Medium City	71.6	-1.7
Small City	74.0	.7

5. The boy lives in

2.3	○	Apple City.
85.6	●	Nevergreen City.
3.3	○	Orange City.
2.9	○	Pine City.
4.1	○	I don't know.
1.9		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	85.6	
REGION		
Northeast	89.7	4.2
Southeast	80.9	-4.7
Central	87.2	1.7
West	82.9	-2.7
SEX		
Male	82.6	-3.0
Female	88.7	3.1
RACE		
White	87.8	2.2
Black	72.5	-13.1
PARENTAL EDUCATION		
No High School Education	71.0	-14.6
Some High School Education	76.6	-8.9
Graduated from High School	85.5	-.0
Post High School Education	90.0	4.4
SIZE-AND-TYPE OF COMMUNITY		
Rural	82.3	-3.3
Inner City	76.1	-9.4
Affluent Suburb	88.2	2.7
Rest of Big City	89.0	3.5
Suburban Fringe	88.7	3.1
Medium City	84.6	-.9
Small City	85.3	-.3

9-Year-Olds
Passage 2
Comprehension Exercises

1. The name armadillo is derived from

9.3	○	a French word.
7.0	○	a German word.
8.8	○	a Latin word.
59.2	●	a Spanish word.
11.8	○	I don't know.
4.0		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	59.2	
REGION		
Northeast	65.0	5.9
Southeast	52.4	-6.7
Central	57.1	-2.0
West	61.3	2.2
SEX		
Male	58.9	-.2
Female	59.4	.3
RACE		
White	62.2	3.0
Black	42.2	-17.0
PARENTAL EDUCATION		
No High School Education	39.4	-19.7
Some High School Education	56.3	-2.8
Graduated from High School	59.6	.5
Post High School Education	65.4	6.3
SIZE-AND-TYPE OF COMMUNITY		
Rural	52.1	-7.1
Inner City	46.2	-13.0
Affluent Suburb	68.5	9.3
Rest of Big City	67.7	8.5
Suburban Fringe	58.2	-1.0
Medium City	56.8	-2.3
Small City	59.5	.3

2. Armadillo young are almost always born

17.4	○	during the winter.
11.5	○	as identical twins.
8.6	○	as identical triplets.
43.6	●	as identical quadruplets.
14.9	○	I don't know.
4.1		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	43.6	
REGION		
Northeast	48.9	5.3
Southeast	39.2	-4.4
Central	44.2	.6
West	40.8	-2.8
SEX		
Male	45.0	1.4
Female	42.2	-1.4
RACE		
White	46.6	3.0
Black	25.1	-18.5
PARENTAL EDUCATION		
No High School Education	29.2	-14.4
Some High School Education	39.8	-3.8
Graduated from High School	42.4	-1.2
Post High School Education	53.8	10.2
SIZE-AND-TYPE OF COMMUNITY		
Rural	31.8	-11.8
Inner City	33.8	-9.8
Affluent Suburb	58.7	15.1
Rest of Big City	49.2	5.7
Suburban Fringe	43.1	-.5
Medium City	40.9	-2.7
Small City	43.2	-.4

3. The armadillo lives in

7.0	⬭	brush piles.
6.3	⬭	hollow logs.
13.1	⬭	nests on the ground.
64.2	●	burrows under the ground.
5.3	⬭	I don't know.
4.1		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	64.2	
REGION		
Northeast	69.5	5.3
Southeast	59.2	-5.0
Central	63.0	-1.2
West	64.2	0.0
SEX		
Male	64.7	0.5
Female	63.7	-.5
RACE		
White	67.1	2.9
Black	45.9	-18.4
PARENTAL EDUCATION		
No High School Education	54.6	-9.6
Some High School Education	52.9	-11.3
Graduated from High School	65.9	1.7
Post High School Education	71.5	7.3
SIZE-AND-TYPE OF COMMUNITY		
Rural	59.5	-4.7
Inner City	49.0	-15.2
Affluent Suburb	68.9	4.6
Rest of Big City	70.1	5.9
Suburban Fringe	66.9	2.7
Medium City	59.9	-4.3
Small City	66.6	2.4

4. South American relatives of the armadillo

9.4	○	have no tail.
6.9	○	live in trees.
36.9	●	have heavier armor.
19.5	○	have only one baby at a time.
23.3	○	I don't know.
4.1		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	36.9	
REGION		
Northeast	39.4	2.5
Southeast	38.0	1.2
Central	34.3	-2.5
West	36.2	-.7
SEX		
Male	37.8	1.0
Female	35.8	-1.0
RACE		
White	38.6	1.7
Black	26.7	-10.1
PARENTAL EDUCATION		
No High School Education	33.7	-3.1
Some High School Education	34.8	-2.0
Graduated from High School	37.4	.5
Post High School Education	40.6	3.8
SIZE-AND-TYPE OF COMMUNITY		
Rural	34.4	-2.5
Inner City	25.7	-11.2
Affluent Suburb	42.4	5.6
Rest of Big City	40.7	3.9
Suburban Fringe	34.8	-2.1
Medium City	35.3	-1.6
Small City	38.8	1.9

5. During the hottest parts of the day, the female armadillo

15.2	○	hunts for worms.
6.2	○	lies in the sun.
10.3	○	looks for water.
52.9	●	rests in her burrow.
11.3	○	I don't know.
4.1		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	52.9	
REGION		
Northeast	54.1	1.2
Southeast	50.6	-2.3
Central	53.6	.7
West	52.9	-.1
SEX		
Male	52.4	-.5
Female	53.5	.5
RACE		
White	56.3	3.4
Black	33.7	-19.2
PARENTAL EDUCATION		
No High School Education	38.0	-14.9
Some High School Education	51.3	-1.7
Graduated from High School	59.1	6.2
Post High School Education	57.2	4.2
SIZE-AND-TYPE OF COMMUNITY		
Rural	48.0	-5.0
Inner City	34.9	-18.0
Affluent Suburb	55.0	2.0
Rest of Big City	55.9	3.0
Suburban Fringe	56.8	3.8
Medium City	50.6	-2.3
Small City	56.4	3.5

13-Year-Olds
Passage 1
Comprehension Exercises

1. A sand dune moves

5.2	○	so slowly that it never does damage.
33.7	○	at a very rapid rate covering houses and forests.
10.9	○	when the wind blows the trees planted on the dunes.
47.2	●	when the wind blows sand up one side of a bare dune and over the top.
2.6	○	I don't know.
0.4		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	47.2	
REGION		
Northeast	49.2	2.0
Southeast	40.5	-6.7
Central	50.5	3.3
West	48.1	.9
SEX		
Male	46.6	-.6
Female	47.8	.6
RACE		
White	49.3	2.1
Black	34.0	-13.2
PARENTAL EDUCATION		
No High School Education	36.5	-10.7
Some High School Education	38.9	-8.3
Graduated from High School	44.2	-3.0
Post High School Education	56.0	8.8
SIZE-AND-TYPE OF COMMUNITY		
Rural	49.7	2.5
Inner City	38.3	-8.9
Affluent Suburb	44.5	-2.7
Rest of Big City	42.1	-5.1
Suburban Fringe	52.3	5.1
Medium City	48.2	1.0
Small City	47.1	-.1

2. Planting pine trees on a barren sand dune

14.8	○	will stop the dune from moving.
14.2	○	will prepare the way for other plants to grow.
61.8	●	is impossible until other plants have prepared the way for them.
4.5	○	is relatively inexpensive and nearly always successful in retarding the dune's movement.
4.4	○	I don't know.
0.3		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	61.8	
REGION		
Northeast	64.7	2.9
Southeast	56.4	-5.3
Central	61.0	-.7
West	65.2	3.5
SEX		
Male	65.7	4.0
Female	57.8	-4.0
RACE		
White	66.8	5.1
Black	32.8	-29.0
PARENTAL EDUCATION		
No High School Education	42.4	-19.3
Some High School Education	53.7	-8.0
Graduated from High School	63.7	2.0
Post High School Education	71.6	9.8
SIZE-AND-TYPE OF COMMUNITY		
Rural	61.8	.1
Inner City	49.3	-12.4
Affluent Suburb	66.3	4.5
Rest of Big City	59.0	-2.7
Suburban Fringe	64.8	3.1
Medium City	62.5	.8
Small City	60.9	-.8

3. Usually the first plants to get a foothold on a moving dune are

29.0	○	mosses.
55.3	●	grasses.
8.5	○	pine trees.
5.9	○	cottonwood trees.
0.9	○	I don't know.
0.4		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	55.3	
REGION		
Northeast	60.9	5.6
Southeast	50.5	-4.8
Central	51.8	-3.5
West	58.7	3.4
SEX		
Male	59.8	4.5
Female	50.8	-4.5
RACE		
White	59.3	4.1
Black	31.3	-24.0
PARENTAL EDUCATION		
No High School Education	45.2	-10.1
Some High School Education	48.7	-6.6
Graduated from High School	52.3	-3.0
Post High School Education	66.7	11.4
SIZE-AND-TYPE OF COMMUNITY		
Rural	51.5	-3.8
Inner City	38.7	-16.6
Affluent Suburb	59.6	4.3
Rest of Big City	55.5	.2
Suburban Fringe	59.5	4.2
Medium City	55.7	.4
Small City	55.7	.4

4. Mosses help more than any other plants in keeping the sand of a dune from blowing about because

18.7	○	they keep the sand heavy and moist.
18.2	○	the roots of the moss are deep, holding the dune in place.
48.5	●	the wind cannot reach the sand beneath the thick mat of moss.
8.6	○	they provide shade which prevents the wind from blowing on the dune.
5.5	○	I don't know.
0.5		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	48.5	
REGION		
Northeast	51.7	3.2
Southeast	43.9	-4.6
Central	46.4	-2.1
West	52.6	4.1
SEX		
Male	52.1	3.6
Female	44.9	-3.6
RACE		
White	50.4	1.9
Black	36.2	-12.3
PARENTAL EDUCATION		
No High School Education	44.8	3.8
Some High School Education	38.5	-10.0
Graduated from High School	46.5	-2.0
Post High School Education	55.8	7.3
SIZE-AND-TYPE OF COMMUNITY		
Rural	47.4	-1.1
Inner City	46.0	-2.5
Affluent Suburb	52.4	3.9
Rest of Big City	47.3	-1.2
Suburban Fringe	48.7	.2
Medium City	46.1	-2.5
Small City	49.2	.7

5. The landowner's experiment failed because

4.8	○	he planted them in strong sunlight.
10.6	○	he planted the trees on the crest of the dune.
4.3	○	he planted the pine trees during the wrong season of the year.
74.5	●	he planted the trees before other plants prepared the way for them.
5.4	○	I don't know.
0.5		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	74.5	
REGION		
Northeast	74.3	-.2
Southeast	72.0	-2.5
Central	76.3	1.8
West	75.1	.6
SEX		
Male	77.0	2.5
Female	72.0	-2.5
RACE		
White	79.5	5.0
Black	46.5	-28.0
PARENTAL EDUCATION		
No High School Education	60.9	-13.6
Some High School Education	63.7	-10.8
Graduated from High School	76.5	2.0
Post High School Education	85.3	10.8
SIZE-AND-TYPE OF COMMUNITY		
Rural	75.5	1.0
Inner City	59.6	-14.9
Affluent Suburb	80.5	6.0
Rest of Big City	64.5	-10.0
Suburban Fringe	76.6	2.1
Medium City	78.9	4.4
Small City	73.4	-1.1

13-Year-Olds
Passage 2
Comprehension Exercises

1. The MOST important agent in shaping land surfaces is

2.0	○	earthquakes.
1.7	○	glaciers.
93.0	●	running water.
1.6	○	wind.
0.9	○	I don't know.
0.8		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	93.0	
REGION		
Northeast	93.5	.4
Southeast	93.7	.7
Central	91.9	-1.2
West	93.4	.3
SEX		
Male	94.7	1.7
Female	91.4	-1.7
RACE		
White	94.4	1.3
Black	85.5	-7.6
PARENTAL EDUCATION		
No High School Education	91.8	-1.3
Some High School Education	94.4	1.3
Graduated from High School	95.0	2.0
Post High School Education	95.4	2.3
SIZE-AND-TYPE OF COMMUNITY		
Rural	94.2	1.2
Inner City	86.0	-7.1
Affluent Suburb	97.7	4.7
Rest of Big City	96.6	3.5
Suburban Fringe	92.8	-.2
Medium City	92.7	-.4
Small City	91.9	-1.2

2. The speed of geologic work is

13.0	○	relatively rapid and spectacular.
16.3	○	dependent upon the topography of the land.
51.4	●	governed by the quantity of water and the rate of its flow.
7.4	○	relatively constant with changes occurring only in dry, rocky lands.
11.1	○	I don't know.
0.8		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	51.4	
REGION		
Northeast	51.5	.1
Southeast	51.6	.3
Central	50.1	-1.3
West	52.6	1.2
SEX		
Male	54.8	3.4
Female	48.0	-3.4
RACE		
White	52.9	1.6
Black	42.7	-8.7
PARENTAL EDUCATION		
No High School Education	52.4	1.0
Some High School Education	44.3	-7.1
Graduated from High School	51.4	0.0
Post High School Education	55.1	3.7
SIZE-AND-TYPE OF COMMUNITY		
Rural	48.3	-3.1
Inner City	44.0	-7.4
Affluent Suburb	57.2	5.8
Rest of Big City	49.5	-1.9
Suburban Fringe	57.8	6.4
Medium City	51.4	0.0
Small City	47.8	-3.6

3. The range in average annual rainfall in the United States is from

12.2	○ 10 to 30 inches.
61.2	● 10 to 70 inches.
13.1	○ 30 to 70 inches.
5.2	○ 80 to 100 inches.
7.5	○ I don't know.
0.8	No response

reporting category	percentage correct	difference from national percentage
NATIONAL	61.2	
REGION		
Northeast	66.1	4.9
Southeast	56.0	-5.2
Central	60.4	-.9
West	62.6	1.4
SEX		
Male	64.2	3.0
Female	58.2	-3.0
RACE		
White	63.5	2.3
Black	47.8	-13.5
PARENTAL EDUCATION		
No High School Education	49.7	-11.5
Some High School Education	51.5	-9.8
Graduated from High School	62.3	1.1
Post High School Education	68.9	7.6
SIZE-AND-TYPE OF COMMUNITY		
Rural	56.4	-4.8
Inner City	52.2	-9.0
Affluent Suburb	64.7	3.5
Rest of Big City	63.0	1.8
Suburban Fringe	64.3	3.1
Medium City	60.8	-.4
Small City	61.3	0.1

4. The MOST important factor in determining water run-off is

26.7	○	the rate of rainfall.
44.9	●	the slope of the land.
8.9	○	the surrounding vegetation.
16.5	○	the condition of the mantle rock.
2.1	○	I don't know.
0.9		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	44.9	
REGION		
Northeast	46.3	1.5
Southeast	41.6	-3.2
Central	46.4	1.6
West	44.8	-.1
SEX		
Male	43.4	-1.5
Female	46.3	1.5
RACE		
White	47.5	2.6
Black	31.3	-13.5
PARENTAL EDUCATION		
No High School Education	39.6	-5.3
Some High School Education	30.2	-14.7
Graduated from High School	49.6	4.8
Post High School Education	49.0	4.1
SIZE-AND-TYPE OF COMMUNITY		
Rural	41.7	-3.2
Inner City	40.4	-4.5
Affluent Suburb	51.0	6.1
Rest of Big City	42.5	-2.3
Suburban Fringe	48.2	3.4
Medium City	44.9	0.0
Small City	42.5	-2.3

5. It would probably take about _____ for the Mississippi River working at the same rate and confining its work to an area 5 miles wide and 5,280 miles long to excavate a valley 200 feet deep.

16.2	○	100 years
20.7	○	10,000 years
50.3	●	100,000 years
3.0	○	1,000,000 years
8.6	○	I don't know.
1.2		No response

reporting category	percentage correct	difference from national percentage
NATIONAL	50.3	
REGION		
Northeast	51.6	1.3
Southeast	48.4	-1.9
Central	50.7	.4
West	50.4	.1
SEX		
Male	52.5	2.2
Female	48.0	-2.2
RACE		
White	50.3	0.0
Black	49.0	-1.2
PARENTAL EDUCATION		
No High School Education	46.0	-4.3
Some High School Education	51.8	1.5
Graduated from High School	49.5	-.7
Post High School Education	51.3	1.0
SIZE-AND-TYPE OF COMMUNITY		
Rural	49.1	-1.1
Inner City	51.9	1.6
Affluent Suburb	51.7	1.5
Rest of Big City	50.0	-.2
Suburban Fringe	52.3	2.0
Medium City	48.0	-2.3
Small City	49.6	-.6

17-Year-Olds
and Young Adults
Passage 1
Comprehension Exercises

17-year-olds	adults		
		1.	Mosquitoes in most species use blood
11.2	14.3	○	for nourishment.
7.4	7.3	○	to feed their larvae.
75.1	70.1	●	to develop their eggs.
5.0	5.4	○	to fertilize female mosquitoes.
1.2	1.8	○	I don't know.
0.3	1.2		No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	75.1		70.1	
REGION				
Northeast	81.2	6.1	73.2	3.2
Southeast	70.7	-4.4	61.3	-8.8
Central	74.3	-0.8	71.0	0.9
West	73.0	-2.1	71.8	1.7
SEX				
Male	77.1	2.0	71.4	1.3
Female	73.0	-2.1	69.9	-1.2
RACE				
White	75.9	0.8	70.3	0.2
Black	68.8	-6.3	64.8	-5.3
PARENTAL EDUCATION				
No High School Education	68.1	-7.0	63.1	-6.9
Some High School Education	71.5	-3.6	71.0	0.9
Graduated from High School	75.1	-0.0	74.6	4.5
Post High School Education	77.5	2.4	74.6	4.5
SIZE OF COMMUNITY				
Big City	73.4	-1.7	65.8	-4.3
Big City Fringe	75.7	0.6	70.9	0.8
Medium City	78.8	3.7	67.9	-2.1
Small City	73.7	-1.4	72.5	2.4

17-year-olds	adults	2. Mosquitoes prefer skin which is	
5.2	5.1	○	moist.
3.3	2.2	○	dry and cool.
77.5	77.7	●	over 90 degrees Fahrenheit.
13.0	13.4	○	between 80 and 87 degrees Fahrenheit.
0.9	0.5	○	I don't know.
0.2	1.2		No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	77.5		77.7	
REGION				
Northeast	81.0	3.5	81.0	3.3
Southeast	70.8	-6.7	64.8	-12.9
Central	81.3	3.8	80.0	2.3
West	74.5	-3.0	80.5	2.8
SEX				
Male	81.6	4.1	77.8	0.2
Female	73.3	-4.2	77.5	-0.2
RACE				
White	79.9	2.4	80.6	2.9
Black	60.3	-17.2	53.6	-24.1
PARENTAL EDUCATION				
No High School Education	64.3	-13.2	66.0	-11.7
Some High School Education	72.4	-5.1	80.3	2.6
Graduated from High School	77.5	-0.0	81.6	3.9
Post High School Education	82.4	4.9	85.3	7.6
SIZE OF COMMUNITY				
Big City	76.2	-1.3	77.2	-0.5
Big City Fringe	81.9	4.5	76.4	-1.3
Medium City	77.7	0.2	80.6	2.9
Small City	75.0	-2.5	77.4	-0.3

17-year-olds	adults	3. Many mosquito bites occur around the head because
4.0	2.3	○ the richest blood is found in the head.
4.1	4.7	○ it is the easiest part of the body for the mosquito to find.
3.1	1.5	○ mosquitoes are attracted to the movement of the eyes and mouth.
83.9	86.6	● carbon dioxide from breathing provides a directional guide for mosquitoes.
4.7	3.5	○ I don't know.
0.2	1.4	No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	83.9		86.6	
REGION				
Northeast	86.4	2.5	89.2	2.6
Southeast	83.1	-0.8	75.6	-11.0
Central	83.7	-0.2	87.6	1.1
West	82.0	-1.9	90.2	3.7
SEX				
Male	83.2	-0.7	87.3	0.7
Female	84.6	0.7	85.9	-0.7
RACE				
White	85.5	1.6	89.1	2.5
Black	73.0	-10.9	65.9	-20.7
PARENTAL EDUCATION				
No High School Education	79.5	-4.4	76.2	-10.4
Some High School Education	84.5	0.6	90.3	3.7
Graduated from High School	82.6	-1.3	88.6	2.0
Post High School Education	87.1	3.2	95.4	8.8
SIZE OF COMMUNITY				
Big City	81.4	-2.5	84.4	-2.2
Big City Fringe	85.3	1.4	86.1	-0.5
Medium City	84.6	0.7	89.1	2.5
Small City	84.1	0.2	86.9	0.3

17-year-olds	adults	4. It is possible to break up a breeding cycle by
85.4	84.9	● humming.
0.9	1.1	○ whistling loudly.
4.3	5.0	○ spraying the area with water.
4.1	3.0	○ shining bright lights on the mosquitoes.
5.1	4.8	○ I don't know.
0.2	1.3	No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	85.4		84.9	
REGION				
Northeast	86.5	1.2	87.9	3.1
Southeast	80.5	-4.9	78.3	-6.5
Central	86.0	0.7	85.2	0.3
West	87.4	2.0	85.7	0.8
SEX				
Male	84.9	-0.5	84.1	-0.8
Female	85.9	0.5	85.6	0.7
RACE				
White	87.5	2.1	87.2	2.3
Black	70.0	-15.4	68.5	-16.4
PARENTAL EDUCATION				
No High School Education	77.9	-7.5	77.0	-7.9
Some High School Education	83.9	-1.5	87.5	2.7
Graduated from High School	85.5	0.2	87.8	2.9
Post High School Education	88.8	3.4	90.6	5.7
SIZE OF COMMUNITY				
Big City	84.1	-1.3	79.2	-5.7
Big City Fringe	88.9	3.5	87.3	2.4
Medium City	85.0	-0.4	89.7	4.8
Small City	83.9	-1.5	84.6	-0.3

17-year-olds	adults		
		5.	A mosquito sucking blood draws out an amount
10.5	12.4	○	equal to its weight.
60.3	64.4	●	almost twice its weight.
6.0	3.2	○	about half of its weight.
5.7	9.6	○	as much as three times its weight.
17.1	9.2	○	I don't know.
0.3	1.3		No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	60.3		64.4	
REGION				
Northeast	61.6	1.3	61.6	-2.8
Southeast	56.3	-4.0	60.4	-4.0
Central	62.1	1.7	64.1	-0.3
West	60.1	-0.2	70.4	6.0
SEX				
Male	64.7	4.3	71.3	6.9
Female	55.9	-4.4	57.7	-6.6
RACE				
White	62.4	2.1	66.4	2.0
Black	45.8	-14.5	46.0	-18.3
PARENTAL EDUCATION				
No High School Education	51.0	-9.4	53.0	-11.3
Some High School Education	51.2	-9.2	65.5	1.1
Graduated from High School	58.1	-2.2	69.4	5.0
Post High School Education	66.7	6.4	74.8	10.4
SIZE OF COMMUNITY				
Big City	62.5	2.1	58.4	-5.9
Big City Fringe	59.7	-0.7	63.6	-0.8
Medium City	63.1	2.8	67.5	3.2
Small City	58.0	-2.3	66.2	1.9

17-Year-Olds
and Young Adults
Passage 2
Comprehension Exercises

1. Who was the French nineteenth-century philosopher who created a general approach to the study of society?

17-year-olds	adults		
79.6	81.1	●	Auguste Comte
2.4	3.1	○	Descartes
6.0	3.6	○	Joseph deMaistre
4.0	3.5	○	Rousseau
6.0	4.6	○	I don't know.
2.1	4.1		No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	79.6		81.1	
REGION				
Northeast	82.0	2.3	84.7	3.6
Southeast	75.5	-4.1	66.8	-14.4
Central	81.6	2.0	82.6	1.5
West	78.0	-1.6	85.4	4.3
SEX				
Male	76.8	-2.8	80.2	-0.9
Female	82.5	2.8	82.0	0.9
RACE				
White	80.1	0.5	83.2	2.1
Black	77.5	-2.2	63.5	-17.6
PARENTAL EDUCATION				
No High School Education	77.4	-2.2	72.2	-8.9
Some High School Education	77.5	-2.1	81.1	0.0
Graduated from High School	76.1	-3.5	83.8	2.7
Post High School Education	84.1	4.5	89.5	8.4
SIZE OF COMMUNITY				
Big City	79.3	-0.3	75.9	-5.2
Big City Fringe	81.8	2.2	84.1	3.0
Medium City	80.3	0.7	81.8	0.7
Small City	77.9	-1.7	81.9	0.8

2. Harvard, our oldest university, did not include a sociology department until what year?

17-year-olds	adults		
6.9	4.6	○	1890
8.0	7.2	○	1900
60.5	71.8	●	1930
4.8	3.6	○	1950
17.8	8.6	○	I don't know.
2.1	4.2		No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	60.5		71.8	
REGION				
Northeast	66.2	5.8	73.4	1.6
Southeast	56.9	-3.5	59.6	-12.1
Central	57.6	-2.8	74.6	2.9
West	60.5	0.1	75.2	3.5
SEX				
Male	63.2	2.7	72.1	0.4
Female	57.7	-2.8	71.4	-0.3
RACE				
White	61.8	1.3	73.5	1.7
Black	52.7	-7.8	56.1	-15.6
PARENTAL EDUCATION				
No High School Education	49.8	-10.7	60.6	-11.2
Some High School Education	54.9	-5.6	75.5	3.7
Graduated from High School	61.0	0.6	77.7	5.9
Post High School Education	63.8	3.3	77.7	5.9
SIZE OF COMMUNITY				
Big City	66.0	5.5	67.2	-4.6
Big City Fringe	62.2	1.7	72.2	0.4
Medium City	59.4	-1.0	70.5	-1.2
Small City	56.5	-4.0	74.1	2.4

17-year-olds	adults	3. Sociology is a _____ discipline.
52.3	58.9	● categorical
10.6	9.4	○ descriptive
14.7	11.4	○ normative
9.3	8.9	○ subjective
11.1	6.6	○ I don't know.
2.2	4.8	No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	52.3		58.9	
REGION				
Northeast	54.3	2.0	60.1	1.2
Southeast	53.8	1.6	58.5	-0.4
Central	54.2	1.9	57.3	-1.6
West	46.3	-5.9	59.6	0.7
SEX				
Male	48.5	-3.8	55.5	-3.4
Female	56.2	3.9	62.1	3.3
RACE				
White	52.8	0.6	59.5	0.6
Black	50.1	-2.1	55.3	-3.6
PARENTAL EDUCATION				
No High School Education	46.9	-5.4	53.5	-5.4
Some High School Education	53.4	1.1	66.3	7.4
Graduated from High School	56.5	4.2	63.9	5.0
Post High School Education	49.5	-2.8	56.8	-2.1
SIZE OF COMMUNITY				
Big City	53.1	0.8	56.4	-2.5
Big City Fringe	52.4	0.2	59.7	0.8
Medium City	51.9	-0.4	57.1	-1.8
Small City	51.9	-0.4	60.3	1.4

17-year-olds	adults		
		4.	The immediate goal of sociology is
4.9	3.4	○	to guide preference in values.
3.4	2.0	○	to determine questions of public policy.
50.9	57.1	●	the acquisition of knowledge about human society.
31.6	28.9	○	the utilization of knowledge about human society.
7.0	4.0	○	I don't know.
2.1	4.5		No response

reporting category	17-year-olds percent correct	17-year-olds diff.	young adults percent correct	young adults diff.
NATIONAL	50.9		57.1	
REGION				
Northeast	51.7	0.8	53.8	-3.3
Southeast	47.4	-3.5	43.8	-13.3
Central	51.3	0.3	62.6	5.5
West	52.7	1.7	63.9	6.8
SEX				
Male	49.5	-1.4	60.2	3.1
Female	52.4	1.5	54.2	-2.9
RACE				
White	52.0	1.1	59.8	2.7
Black	44.0	-6.9	35.9	-21.2
PARENTAL EDUCATION				
No High School Education	42.6	-8.3	44.9	-12.3
Some High School Education	47.4	-3.6	48.9	-8.2
Graduated from High School	48.3	-2.7	62.2	5.1
Post High School Education	57.9	7.0	73.5	16.4
SIZE OF COMMUNITY				
Big City	53.3	2.4	60.0	2.8
Big City Fringe	52.7	1.8	64.4	7.3
Medium City	52.4	1.5	64.2	7.1
Small City	47.5	-3.4	49.8	-7.3

17-year-olds	adults	5. Sociology is a
39.0	41.7	● pure science.
11.7	11.1	○ applied science.
9.3	7.5	○ concrete science.
34.8	32.0	○ special social science.
3.1	3.1	○ I don't know.
2.2	4.6	No response

reporting category	17-year-olds percent correct	diff.	young adults percent correct	diff.
NATIONAL	39.0		41.7	
REGION				
Northeast	41.2	2.2	44.8	3.1
Southeast	37.9	-1.0	31.7	-10.1
Central	39.1	0.2	39.9	-1.9
West	37.2	-1.8	47.3	5.9
SEX				
Male	37.8	-1.2	43.0	1.2
Female	40.2	1.2	40.5	-1.2
RACE				
White	40.8	1.9	43.2	1.5
Black	25.7	-13.3	25.9	-15.8
PARENTAL EDUCATION				
No High School Education	32.5	-6.5	30.3	-11.4
Some High School Education	30.7	-8.3	41.9	0.2
Graduated from High School	36.2	-2.7	49.5	7.8
Post High School Education	46.6	7.6	49.6	7.8
SIZE OF COMMUNITY				
Big City	35.3	-3.7	35.7	-6.1
Big City Fringe	41.9	2.9	43.0	1.2
Medium City	39.2	0.3	46.4	4.7
Small City	39.0	0.0	42.2	0.5

APPENDIX C

PERCENTAGES OF THE POPULATION WHO ANSWERED FOUR OR MORE COMPREHENSION QUESTIONS CORRECTLY ON BOTH PASSAGES AND READ BOTH PASSAGES WITHIN THE SAME RATE CATEGORY

Exhibit C-1

Percentages of 9-Year-Olds Who Answered Four or More Comprehension Questions Correctly on Both Passages and Read Both Passages Within the Same Rate Category

Categories	<100 % reading*	<100 % comp.*	100-199 % reading	100-199 % comp.	200-299 % reading	200-299 % comp.	>300 % reading	>300 % comp.
National	22.4	18.7	36.0	41.9	2.8	38.7	0.8	33.2
Northeast	24.0	14.7	35.0	45.6	2.0	34.9	0.4	40.3
Southeast	23.4	25.0	30.2	35.7	2.2	34.0	0.7	17.1
Central	19.9	19.8	41.1	38.6	2.9	43.2	0 5	53.2
West	22.9	16.0	36.0	47.3	4.1	39.1	2.0	29.3
Male	26.3	20.8	34.0	48.0	2.1	57.4	0.9	16.7
Female	18.3	15.3	38.1	36.1	3.5	27.1	0.8	53.2
White	20.4	22.0	39.3	43.3	2.9	38.4	1.0	33.8
Black	34.3	6.6	15.9	21.7	1.7	20.5	0.1	0.0
No High School	22.0	11.5	32.4	13.7	4.1	36.1	1.7	0.0
Some High School	27.2	15.8	28.9	36.9	1.8	41.3	1.5	0.0
Graduated High School	18.0	19.0	37.5	47.5	3.4	25.3	0.5	73.7
Post High School	16.2	31.8	41.7	45.0	3.1	55.1	1.2	24.7
Rural	24.9	16.1	37.2	39.4	2.3	72.6	0.0	0.0
Inner City	37.1	8.5	20.2	30.6	4.3	32.6	0.0	0.0
Affluent Suburb	20.1	21.2	41.5	47.3	3.2	32.6	1.1	100.0
Rest of Big City	14.3	16.4	42.7	56.2	3.1	40.7	0.1	0.0
Suburban Fringe	26.3	27.6	35.4	38.2	2.2	16.4	1.6	0.0
Medium City	19.8	17.7	37.0	36.3	3.4	47.8	0.8	46.8
Small City	21.5	17.9	34.0	40.9	2.2	35.7	1.1	24.9

*% reading = percent of 9-year-olds who read both passages within that rate category.

% comp. = percent within that rate category who had four or more correct responses to the comprehension exercises on both passages.

NOTE: it might help the reader to distinguish between the exhibits in Appendix C and the exhibits in Appendix D by viewing data in the C exhibits as percentages of comprehension within rate categories and data in the D exhibits as percentages of rates within comprehension.

Exhibit C-2

Percentages of 13-Year-Olds Who Answered Four or More Comprehension Questions Correctly on Both Passages and Read Both Passages Within the Same Rate Category

Categories	<100 % reading*	<100 % comp.*	100-199 % reading	100-199 % comp.	200-299 % reading	200-299 % comp.	>300 % reading	>300 % comp.
National	6.7	11.8	45.3	17.8	16.3	25.2	2.8	16.6
Northeast	8.6	11.9	41.5	23.4	17.0	29.0	2.9	17.1
Southeast	6.5	0.0	52.6	16.5	12.8	11.2	2.4	16.2
Central	5.9	2.2	44.0	16.2	17.9	28.2	2.5	11.5
West	6.0	36.9	43.1	15.6	17.4	28.0	3.4	21.2
Male	9.6	14.8	46.7	19.0	15.1	31.2	2.2	16.5
Female	3.8	4.3	43.9	16.6	17.6	20.2	3.3	16.8
White	5.5	16.6	44.8	20.1	17.9	25.9	3.0	18.1
Black	13.8	1.6	48.1	5.2	7.2	13.7	1.5	0.0
No High School	11.5	15.7	49.0	15.5	7.4	19.6	1.3	0.0
Some High School	5.4	0.0	60.9	10.3	8.6	15.4	0.3	0.0
Graduated High School	5.1	5.7	47.2	17.9	16.0	19.0	2.5	39.1
Post High School	3.4	19.2	38.2	24.6	23.1	33.3	4.3	8.2
Rural	7.7	3.0	60.8	15.8	9.2	16.5	1.5	22.6
Inner City	14.3	10.2	46.0	9.8	6.7	14.1	2.9	33.3
Affluent Suburb	5.2	40.2	40.0	19.9	19.7	31.1	4.5	36.6
Rest of Big City	10.3	8.8	42.3	20.5	14.2	22.2	5.7	0.0
Suburban Fringe	8.1	12.2	40.5	19.1	20.6	27.9	2.2	11.6
Medium City	3.0	16.1	44.5	20.0	15.0	22.3	3.1	21.4
Small City	5.8	4.2	46.7	17.3	17.9	24.5	1.8	21.6

*% reading = percent of 13-year-olds who read both passages within that rate category.

% comp. = percent within that rate category who had four or more correct responses to the comprehension exercises on both passages.

Exhibit C-3

Percentages of 17-Year-Olds Who Answered Four or More Comprehension Questions Correctly on Both Passages and Read Both Passages Within the Same Rate Category

Categories	<100		100-199		200-299		>300	
	% reading*	% comp.*	% reading	% comp.	% reading	% comp.	% reading	% comp.
National	2.2	11.5	38.6	21.0	22.6	31.6	4.6	27.3
Northeast	1.7	0.5	42.2	26.3	21.8	37.4	3.5	44.1
Southeast	1.5	9.5	43.8	21.4	18.4	24.8	3.2	11.5
Central	1.3	24.3	37.0	17.0	24.1	27.3	6.8	20.2
West	4.3	12.1	32.1	18.5	25.1	34.9	4.5	36.0
Male	3.2	13.4	40.5	20.6	19.9	35.9	4.5	25.5
Female	1.1	5.8	36.6	21.3	25.3	27.9	4.8	29.2
White	1.3	17.9	37.2	21.3	24.7	32.6	5.1	28.6
Black	8.1	4.7	49.2	19.3	8.8	9.1	1.6	0.0
No High School	3.8	32.8	52.4	12.7	12.1	31.5	2.7	0.0
Some High School	2.9	22.0	45.5	21.1	17.9	16.6	1.0	14.0
Graduated High School	1.6	10.6	41.6	22.2	23.8	23.8	4.1	14.4
Post High School	0.7	3.4	29.8	22.5	27.0	40.7	7.4	34.5
Big City	2.2	0.0	44.2	23.3	20.4	43.7	3.2	40.1
Suburban Fringe	0.7	24.1	37.7	20.1	24.5	33.2	5.9	21.5
Medium City	4.3	0.3	32.4	23.4	21.5	37.3	4.3	16.1
Small City	2.0	28.5	39.2	19.0	23.0	20.9	4.8	32.9
Rural	2.6	13.5	47.5	25.3	17.7	22.8	2.5	10.9
Inner City	4.8	0.0	53.3	15.6	12.9	39.5	0.3	50.0
Affluent Suburb	0.0	0.0	34.7	28.2	26.2	55.8	6.6	40.3
Rest of Big City	0.9	0.0	40.5	27.8	26.6	34.5	4.2	17.6
Suburban Fringe	1.0	25.7	38.6	19.3	22.9	23.0	5.6	18.8
Medium City	3.2	0.0	32.3	21.8	22.7	38.2	4.9	32.4
Small City	1.7	40.4	37.1	17.0	25.1	21.4	5.6	37.0

*% reading = percent of 17-year-olds who read both passages within that rate category.

% comp. = percent within that rate category who had four or more correct responses to the comprehension exercises on both passages.

Exhibit C-4

Percentages of Young Adults Who Answered Four or More Comprehension Questions Correctly on Both Passages and Read Both Passages Within the Same Rate Category

Categories	<100		100-199		200-299		>300	
	% reading*	% comp.*	% reading	% comp.	% reading	% comp.	% reading	% comp.
National	4.8	15.2	40.7	35.8	19.5	46.6	3.9	23.3
Northeast	3.7	21.4	43.2	35.0	20.5	43.0	3.3	9.0
Southeast	8.9	6.1	45.8	18.1	16.0	43.9	2.9	12.6
Central	5.1	27.4	44.8	40.1	17.5	50.0	4.1	15.7
West	2.8	3.1	30.0	48.4	23.1	48.6	5.1	44.0
Male	6.7	6.0	39.5	38.3	20.0	46.0	3.6	26.1
Female	2.9	35.5	41.8	33.3	19.1	47.3	4.2	20.9
White	2.6	14.8	40.8	36.4	21.4	47.5	4.0	23.6
Black	18.3	0.0	40.1	25.8	5.4	35.7	3.7	20.2
No High School	9.1	2.1	43.8	25.5	15.8	41.6	1.8	0.0
Some High School	6.3	36.6	45.0	31.8	15.6	49.7	1.5	33.3
Graduated High School	2.2	5.2	44.4	46.1	21.6	44.3	4.4	19.6
Post High School	0.9	100.0	28.8	44.7	24.1	57.7	8.1	31.5
Big City	8.2	23.7	33.3	32.6	19.0	45.6	4.3	32.0
Suburban Fringe	3.6	13.5	40.8	44.0	19.4	38.2	3.9	11.3
Medium City	3.0	0.0	35.7	38.2	22.1	50.5	6.9	25.1
Small City	4.4	12.7	45.8	32.7	18.9	49.4	2.6	22.9

*% reading = percent of young adults who read both passages within that rate category.

% comp. = percent within that rate category who had four or more correct responses to the comprehension exercises on both passages.

APPENDIX D

PERCENTAGES OF THE POPULATION WHO READ IN EACH RATE CATEGORY ON BOTH PASSAGES AND WHO ANSWERED FOUR OR MORE COMPREHENSION QUESTIONS CORRECTLY ON BOTH PASSAGES

Exhibit D-1

Percentage of 9-Year-Olds Who Read in Each Rate Category On Both Passages and Who Answered Four or More Comprehension Questions Correctly on Both Passages

Categories	% answering 4 or more on both passages	% reading in each category <100	100-199	200-299	>300
National	30.4	13.8	49.5	3.5	0.9*
Northeast	33.5	10.5	47.6	2.1	0.5
Southeast	28.0	21.0	38.4	2.7	0.4
Central	30.3	13.0	52.4	4.1	0.9
West	29.3	12.6	58.2	5.5	2.0
Male	33.1	16.6	49.2	3.6	0.5
Female	27.6	10.2	49.9	3.4	1.5
White	33.4	13.4	51.0	3.3	1.0
Black	12.7	17.7	27.1	2.7	0.0
No High School	15.8	16.0	38.3	9.3	0.0
Some High School	21.4	20.1	49.8	3.6	0.0
Graduated High School	32.9	10.4	54.1	2.6	1.0
Post High School	38.6	13.3	48.7	4.4	0.7
Rural	25.7	15.6	57.1	6.6	0.0
Inner City	15.2	20.8	40.7	9.2	0.0
Affluent Suburb	38.0	11.2	51.9	2.7	3.0
Rest of Big City	36.8	6.4	65.1	3.4	0.0
Suburban Fringe	31.7	23.0	42.8	1.1	0.0
Medium City	27.1	12.9	49.5	6.0	1.4
Small City	31.6	12.2	44.2	2.5	0.9

*Total percentages across a row do not sum to 100% because these percentages include only those who read both passages within the same rate category.

NOTE: it might help the reader to distinguish between the exhibits in Appendix C and the exhibits in Appendix D by viewing data in the C exhibits as percentages of comprehension within rate categories and data in the D exhibits as percentages of rates within comprehension.

Exhibit D-2

Percentage of 13-Year-Olds Who Read in Each Rate Category
On Both Passages and Who Answered Four or More Comprehension
Questions Correctly on Both Passages

Categories	% answering 4 or more on both passages	% reading in each category			
		<100	100-199	200-299	>300
National	17.9	4.4	45.0	23.0	2.6*
Northeast	21.6	4.8	45.2	22.9	2.3
Southeast	12.9	0.0	67.8	11.0	3.0
Central	18.0	0.7	39.7	28.0	1.6
West	19.3	11.5	34.8	25.3	3.7
Male	20.3	7.0	43.7	23.2	1.8
Female	15.6	1.1	46.6	22.7	3.6
White	20.0	4.6	44.9	23.1	2.7
Black	5.5	3.9	45.3	17.9	0.0
No High School	13.3	13.7	57.6	10.9	0.0
Some High School	7.7	0.0	81.4	17.1	0.0
Graduated High School	16.7	1.8	50.7	18.2	5.7
Post High School	25.5	2.5	37.0	30.1	1.4
Rural	14.8	1.6	65.1	10.3	2.3
Inner City	11.3	12.9	40.1	8.5	8.5
Affluent Suburb	21.2	10.0	37.5	29.0	3.1
Rest of Big City	16.2	5.6	53.5	19.5	0.0
Suburban Fringe	21.8	4.5	35.4	26.3	1.2
Medium City	18.8	2.6	47.2	17.8	3.6
Small City	16.5	1.5	49.1	26.7	2.4

*Total percentages across a row do not sum to 100% because these percentages include only those who read both passages within the same rate category.

Exhibit D-3

Percentage of 17-Year-Olds Who Read in Each Rate Category
On Both Passages and Who Answered Four or More Comprehension
Questions Correctly on Both Passages

Categories	% answering 4 or more on both passages	% reading in each category			
		<100	100-199	200-299	>300
National	25.1	1.0	32.2	28.3	5.1*
Northeast	30.4	0.0	36.5	26.9	5.1
Southeast	21.7	0.6	43.2	21.0	1.7
Central	22.9	1.4	27.4	28.6	6.0
West	25.0	2.1	23.8	35.0	6.4
Male	25.6	1.7	32.8	28.0	4.5
Female	24.7	0.3	31.6	28.6	5.6
White	26.6	0.9	29.9	30.4	5.5
Black	15.0	2.6	63.0	5.3	0.0
No High School	17.0	7.4	39.2	22.4	0.0
Some High School	19.5	3.3	49.3	15.2	0.7
Graduated High School	23.2	0.7	39.7	24.4	2.5
Post High School	30.9	0.1	21.7	35.5	8.2
Big City	21.9	0.0	35.5	30.7	4.4
Suburban Fringe	24.7	0.7	30.6	32.9	5.2
Medium City	26.6	0.0	28.6	30.1	2.6
Small City	22.4	2.6	33.3	21.6	7.0
Rural	22.3	1.6	54.2	18.0	1.2
Inner City	21.4	0.0	39.0	23.7	0.7
Affluent Suburb	37.1	0.0	26.4	39.3	7.2
Rest of Big City	30.1	0.0	37.4	30.5	2.5
Suburban Fringe	21.8	1.2	34.2	24.1	4.8
Medium City	26.2	0.0	26.9	33.1	3.1
Small City	23.2	2.9	27.2	23.2	8.9

*Total percentages across a row do not sum to 100% because these percentages include only those who read both passages within the same rate category.

Exhibit D-4

Percentage of Young Adults Who Read in Each Rate Category On Both Passages and Who Answered Four or More Comprehension Questions Correctly on Both Passages

Categories	% answering 4 or more on both passages	% reading in each category <100	100-199	200-299	>300
National	36.3	2.0	40.0	25.1	2.5*
Northeast	35.1	2.3	43.2	25.2	0.8
Southeast	21.6	2.5	38.4	32.4	1.7
Central	38.7	3.6	46.3	22.6	1.7
West	45.3	0.2	32.1	24.8	4.9
Male	38.2	1.0	39.6	24.0	2.4
Female	34.5	3.0	40.4	26.2	2.6
White	38.1	1.0	39.0	26.6	2.5
Black	19.2	0.0	54.1	10.0	3.9
No High School	25.9	0.8	43.0	25.3	0.0
Some High School	35.4	6.5	40.4	21.9	1.4
Graduated High School	42.5	0.3	48.3	22.5	2.1
Post High School	46.2	1.9	27.8	30.2	5.5
Big City	33.1	5.8	32.7	26.2	4.1
Suburban Fringe	41.4	1.2	43.3	17.9	1.1
Medium City	38.5	0.0	35.4	28.9	4.5
Small City	34.7	1.6	43.3	26.8	1.7

*Total percentages across a row do not sum to 100% because these percentages include only those who read both passages within the same rate category.